ACI STRUCTURAL JOURNAL

INDEX VOLUME 107, 2010

From a Journal of the American Concrete Institute, January through December 2010

American Concrete Institute®
Advancing concrete knowledge

AMERICAN CONCRETE INSTITUTE, Farmington Hills, Michigan

ACI Structural Journal VOLUME 107, 2010

Remove this section and include it with your January through December 2010 Volume 107 issues of the *ACI Structural Journal*.

A

Abdel-Baky, H. M. Nonlinear Stability Analysis of Concrete-Filled Fiber-Reinforced Polymer-Tube Columns: Experimental and Theoretical Investigation (107-69) Nov.-Dec. 2010 699

Active confinement Spiral Post-Tensioning System for Concrete Members (107-S55) Krishnamra, N.; Limsuwan, E.; and Dawe, J., Sept.-Oct. 2010 563

Acun, B. Performance of Reinforced Concrete Columns Designed for Flexure under Severe Displacement Cycles (107-S36) May-June 2010. ... 364

Adaptable Strut-and-Tie Model for Design and Verification of Four-Pile Caps (106-S15)

—Souza, R.; Kuchma, D.; Park, J.W.; and Bittencourt, T., Mar.-Apr. 2009. .. 142

—Disc. by Windisch, A., Jan.-Feb. 2010. 119

Adhesive joint Ultimate Strength of Reinforced Concrete Beams Retrofitted with Hybrid Bonded Fiber-Reinforced Polymer (107-S45) Wu, Y.-F.; Yan, J.-H.; Zhou, Y.-W.; and Xiao, Y., July-Aug. 2010 451

Aggregate Seismic Shear Behavior of Lightweight Aggregate Concrete Square Columns (107-S67) Hendrix, S. E., and Kowalsky, M. J., Nov.-Dec. 2010. 680

Aggregate size Interaction between Bond and Deviation Forces in Spalling Failures of Arch-Shaped Members without Transverse Reinforcement (107-S34) Fernández Ruiz, M.; Plumey, S.; and Muttoni, A., May-June 2010. 346

Ahmed, E. A. Performance Evaluation of Glass Fiber-Reinforced Polymer Shear Reinforcement for Concrete Beams (107-S06) Jan.-Feb. 2010 53

Akiyama, M. Stress-Averaged Strain Model for Confined High-Strength Concrete (107-S18) Mar.-Apr. 2010. 179

Alexander, M. G. Crack Behavior near Reinforcing Bars in Concrete Structures (Disc. 106-S25) Mar.-Apr. 2010 248

Analytical Model for Fiber-Rein forced Polymer-Jacketed Square Concrete Columns in Axial Compression (107-S21) Lee, C.-S.; Hegemier, G. A.; and Phillippi, D. J., Mar.-Apr. 2010. 208

Analytical Modeling of Medium-Rise Reinforced Concrete Shear Walls (107-S39) Jiang, H., and Kurama, Y. C., July-Aug. 2010 400

Anchor(s)

—Performance of Retrofit Highway Barriers with Mechanical Anchors (107-S37) Mitchell, G.; Strahota, M. T.; Gokani, V.; Picón, R.; Yang, S.; Klingner, R. E.; and Williamson, E. B., July-Aug. 2010. 381

—Seismic Rehabilitation of Slab-Column Connections (107-S24) Widianto; Bayrak, O.; Jirsa, J. O.; and Tian, Y., Mar.-Apr. 2010 237

—Shear Behavior of Headed Anchors with Large Diameters and Deep Embedments (107-S14) Lee, N. H.; Park, K. R.; and Suh, Y. P., Mar.-Apr. 2010 146

—**Anchor bolt** Shear Behavior of Headed Anchors with Large Diameters and Deep Embedments (107-S14) Lee, N. H.; Park, K. R.; and Suh, Y. P., Mar.-Apr. 2010 146

Ansley, M. Headed Shear Reinforcement Assemblies for One-Way Shear (Disc. 106-S82) Sept.-Oct. 2010 617

Arch action Shear Behavior of Large-Scale Post-Tensioned Girders with Small Shear Span-Depth Ratio (107-S13) Lee, S.-C.; Cho, J.-Y.; and Oh, B.-H., Mar.-Apr. 2010. 137

Arching action Transverse Resistance of Masonry Infills (107-S46) Moghaddam, H., and Goudarzi, N., July-Aug. 2010 461

Axial compression Analytical Model for Fiber-Reinforced Polymer-Jacketed Square Concrete Columns in Axial Compression (107-S21) Lee, C.-S.; Hegemier, G. A.; and Phillippi, D. J., Mar.-Apr. 2010. 208

B

Bar Bar Pullout Tests and Seismic Tests of Small-Headed Bars in Beam-Column Joints (107-S04) Kang, T. H.-K.; Ha, S.-S.; and Choi, D.-U., Jan.-Feb. 2010. 32

Bar Pullout Tests and Seismic Tests of Small-Headed Bars in Beam-Column Joints (107-S04) Kang, T. H.-K.; Ha, S.-S.; and Choi, D.-U., Jan.-Feb. 2010. 32

Bar slip Stiffness of Reinforced Concrete Frame Members for Seismic Analysis (107-S60) Kumar, R., and Singh, Y., Sept.-Oct. 2010. 607

Barriers Performance of Retrofit Highway Barriers with Mechanical Anchors (107-S37) Mitchell, G.; Strahota, M. T.; Gokani, V.; Picón, R.; Yang, S.; Klingner, R. E.; and Williamson, E. B., July-Aug. 2010 ... 381

Bayrak, O.

—Confinement of Deep Beam Nodal Regions (107-S70) Nov.-Dec. 2010 709

—Effects of Increasing Allowable Compressive Stress at Prestress Transfer (107-S03) Jan.-Feb. 2010 21

—Seismic Rehabilitation of Slab-Column Connections (107-S24) Mar.-Apr. 2010 237

Beam(s)

—Investigation of Ultimate Strength of Deck Slabs in Steel-Concrete Bridges (107-S09) Zheng, Y.; Taylor, S.; Robinson, D.; and Cleland, D., Jan.-Feb. 2010 82

—Shear Strengths of Prestressed Concrete Beams Part 1: Experiments and Shear Design Equations (107-S32) Laskar, A.; Hsu, T. T. C.; and Mo, Y. L., May-June 2010 330

—Shear Strengths of Prestressed Concrete Beams Part 2: Comparisons with ACI and AASHTO Provisions (107-S33) Hsu, T. T. C.; Laskar, A.; and Mo, Y. L., May-June 2010 340

Beam column Pushover Analysis of Shear-Critical Frames: Formulation (107-S07) Guner, S., and Vecchio, F. J., Jan.-Feb. 2010 63

Beam-column connections Behavior of Deficient Joints with Plain Bars and Low-Strength Concrete (107-S29) Bedirhanoglu, I.; Ilki, A.; Pujol, S.; and Kumbasar, N., May-June 2010. 300

Bedirhanoglu, I. Behavior of Deficient Joints with Plain Bars and Low-Strength Concrete (107-S29) May-June 2010. 300

Behavior of Deficient Joints wi th Plain Bars and Low-Strength Concrete (107-S29) Bedirhanoglu, I.; Ilki, A.; Pujol, S.; and Kumbasar, N., May-June 2010 300

Behavior of Fiber-Reinforced Concrete Columns under Axially a nd Eccentrically Compressive Loads (107-S26) Campione, G.; Fossetti, M.; and Papia, M., May-June 2010. 272

Behavior of Full-Scale Glass Fibe r-Reinforced Polymer Reinforced Concrete Columns under Axial Load (107-S58) De Luca, A., Matta, F.; and Nanni, A., Sept.-Oct. 2010. 589

Behavior of High-Performance St eel as Shear Reinforcement for Concrete Beams (106-S18)

—Sumpter, M. S.; Rizkalla, S. H.; and Zia, P., Mar.-Apr. 2009 171

—Disc. by Windisch, A., Jan.-Feb. 2010 122

Behavior of Large Deep Beams Sub jected to Monotonic and Reversed Cyclic Shear (107-S72) Mihaylov, B. I.; Bentz, E. C.; and Collins, M. P., Nov.-Dec. 2010. 726

Behavior of Reinforced Concrete Columns Confined by New Steel-Jacketing Method (107-S64) Choi, E.; Chung, Y.-S.; Park, J.; and Cho, B.-S., Nov.-Dec. 2010. 654

Bending Performance Evaluation of Glass Fiber-Reinforced Polymer Shear Reinforcement for Concrete Beams (107-S06) Ahmed, E. A.; El-Salakawy, E. F.; and Benmokrane, B., Jan.-Feb. 2010. 53

Benmokrane, B. Performance Evaluation of Glass Fiber-Reinforced Polymer Shear Reinforcement for Concrete Beams (107-S06) Jan.-Feb. 2010. 53

Bent caps

—Evaluation of Reinforced Concrete Deck Girder Bridge Bent Caps with 1950s Vintage Details: Analytical Methods (107-S53) Senturk, A. E., and Higgins, C., Sept.-Oct. 2010 544

—Evaluation of Reinforced Concrete Deck Girder Bridge Bent Caps with 1950s Vintage Details: Laboratory Tests (107-S52) Senturk, A. E., and Higgins, C., Sept.-Oct. 2010 534

Bentz, E. C. Behavior of Large Deep Beams Subjected to Monotonic and Reversed Cyclic Shear (107-S72) Nov.-Dec. 2010 726

Berlin, K. B. Flexural Cracks in Fiber-Reinforced Concrete Beams with Fiber-Reinforced Polymer Reinforcing Bars (107-S31) May-June 2010 321

Bhargava, P. Evaluation of Load Transfer and Strut Strength of Deep Beams with Short Longitudinal Bar Anchorages (Disc. 106-S63) July-Aug. 2010 491
Biaxial bending Nonlinear Analysis of Cross Sections under Axial Load and Biaxial Bending (107-S38) Di Ludovico, M.; Lignola, G. P.; Prota, A.; and Cosenza, E., July-Aug. 2010 390
Birrcher, D. B.
—Confinement of Deep Beam Nodal Regions (107-S70) Nov.-Dec. 2010 709
—Effects of Increasing Allowable Compressive Stress at Prestress Transfer (107-S03) Jan.-Feb. 2010 21
Bond
—Compression Lap Splice in Unconfined Concrete of 40 and 60 MPa (5800 and 8700 psi) Compressive Strengths (107-S17) Chun, S.-C.; Lee, S.-H.; and Oh, B., Mar.-Apr. 2010 170
—Compression Splices in Confined Concrete of 40 and 60 MPa (5800 and 8700 psi) Compressive Strengths (107-S48) Chun, S.-C.; Lee, S.-H.; and Oh, B., July-Aug. 2010 476
Bond slip FEA Implementation of Smeared Cyclic Bond Slip-Based Two-Dimensional Membrane Model (107-S10) So, M.; Harmon, T. G.; and Dyke, S., Jan.-Feb. 2010 92
Bond stress New Formula to Calculate Crack Spacing for Concrete Plates, A (107-S05) Rizk, E., and Marzouk, H., Jan.-Feb. 2010 43
Bonded reinforcement Strengthening of Flat Slabs Against Punching Shear Using Post-Installed Shear Reinforcement (107-S43) Fernández Ruiz, M.; Muttoni, A.; and Kunz, J., July-Aug. 2010 434
Boundary element method Boundary Element Method Calculation of Moment Transfer Parameters in Slab-Column Connections (107-S16) Nazief, M. A.; Rashed, Y. F.; and El-Degwy, W. M., Mar.-Apr. 2010 164
Boundary Element Method Calculation of Moment Transfer Parameters in Slab-Column Connections (107-S16) Nazief, M. A.; Rashed, Y. F.; and El-Degwy, W. M., Mar.-Apr. 2010 164
Box culverts Fatigue Evaluation for Reinforced Concrete Box Culverts (107-S02) Maximos, H.; Erdogmus, E.; and Tadros, M. K., Jan.-Feb. 2010 13
Brick shells Experiments on Reinforced Brick Masonry Vaulted Light Roofs (107-S35) López-Almansa, F.; Roca, P.; Sarrablo, V.; Cahís, X.; and Canet, J. M., May-June 2010 355
Bridge(s)
—Evaluation of Reinforced Concrete Deck Girder Bridge Bent Caps with 1950s Vintage Details: Analytical Methods (107-S53) Senturk, A. E., and Higgins, C., Sept.-Oct. 2010 544
—Evaluation of Reinforced Concrete Deck Girder Bridge Bent Caps with 1950s Vintage Details: Laboratory Tests (107-S52) Senturk, A. E., and Higgins, C., Sept.-Oct. 2010 534
—Experimental and Analytical Evaluation of Reinforced Concrete Girders under Low-Cycle Shear Fatigue (107-S20) Forrest, R. W. B.; Higgins, C.; and Senturk, A. E., Mar.-Apr. 2010 199
—Investigation of Ultimate Strength of Deck Slabs in Steel-Concrete Bridges (107-S09) Zheng, Y.; Taylor, S.; Robinson, D.; and Cleland, D., Jan.-Feb. 2010 82
Bridge column Experimental Study of Reinforced Concrete Bridge Columns Subjected to Near-Fault Ground Motions (107-S01) Choi, H.; Saiid Saiidi, M.; Somerville, P.; and El-Azazy, S., Jan.-Feb. 2010 3
Broujerdian, V. Smeared Rotating Crack Model for Reinforced Concrete Membrane Elements (107-S40) July-Aug. 2010 411
Brown, T. Seismic Behavior of 150 MPa (22 ksi) Concrete Flexural Elements (107-S30) May-June 2010 311
Buckling Nonlinear Stability Analysis of Concrete-Filled Fiber-Reinforced Polymer-Tube Columns: Experimental and Theoretical Investigation (107-69) Mohamed, H. M.; Abdel-Baky, H. M.; and Masmoudi, R., Nov.-Dec. 2010 699
Building codes Evaluation of Reinforced Concrete Deck Girder Bridge Bent Caps with 1950s Vintage Details: Analytical Methods (107-S53) Senturk, A. E., and Higgins, C., Sept.-Oct. 2010 544
Buried st ructures Fatigue Evaluation for Reinforced Concrete Box Culverts (107-S02) Maximos, H.; Erdogmus, E.; and Tadros, M. K., Jan.-Feb. 2010 13

C

Cahís, X. Experiments on Reinforced Brick Masonry Vaulted Light Roofs (107-S35) May-June 2010 355
Campione, G. Behavior of Fiber-Reinforced Concrete Columns under Axially and Eccentrically Compressive Loads (107-S26) May-June 2010 272
Canet, J. M. Experiments on Reinforced Brick Masonry Vaulted Light Roofs (107-S35) May-June 2010 355
Carbon fiber-reinforced polymer Carbon Fiber-Reinforced Polymer Confined Reactive Powder Concrete Columns—Experimental Investigation (107-S25) Malik, A. R., and Foster, S. J., May-June 2010 263
Carbon Fiber-Reinforced Polymer Confined Reactive Powder Concrete Columns—Experimental Investigation (107-S25) Malik, A. R., and Foster, S. J., May-June 2010 263
Carbon Fiber-Reinforced Polymer for Continuity in Existing Reinforced Concrete Buildings Vulnerable to Collapse (106-S56)
—Orton, S.; Jirsa, J. O.; and Bayrak, O., Sept.-Oct. 2009 608
—Disc. by de Souza, R. A., July-Aug. 2010 488
Carbon fiber-reinforced polymer sheets Seismic Rehabilitation of Slab-Column Connections (107-S24) Widianto; Bayrak, O.; Jirsa, J. O.; and Tian, Y., Mar.-Apr. 2010 237
Carbon fiber-reinforced polymer stirrups Seismic Rehabilitation of Slab-Column Connections (107-S24) Widianto; Bayrak, O.; Jirsa, J. O.; and Tian, Y., Mar.-Apr. 2010 237
Cast-in-place Shear Behavior of Headed Anchors with Large Diameters and Deep Embedments (107-S14) Lee, N. H.; Park, K. R.; and Suh, Y. P., Mar.-Apr. 2010 146
Cevik, A. New Formula to Calculate Minimum Flexure Reinforcement for Thick High-Strength Concrete Plates (Disc. 106-S61) July-Aug. 2010 490
Chen, S. Pushover Analysis of Shear-Critical Frames: Verification and Application (Disc. 107-S08) Nov.-Dec. 2010 743
Cheng, M.-Y.
—Evaluation of Steel Fiber Reinforcement for Punching Shear Resistance in Slab-Column Connections—Part I: Monotonically Increased Load (107-S11) Jan.-Feb. 2010 101
—Evaluation of Steel Fiber Reinforcement for Punching Shear Resistance in Slab-Column Connections—Part II: Lateral Displacement Reversals (107-S12) Jan.-Feb. 2010 110
Cheng, Z.-Y. Seismic Design Method for Reinforced Concrete Two-Way Column Hinges (107-S56) Sept.-Oct. 2010 572
Cho, B.-S. Behavior of Reinforced Concrete Columns Confined by New Steel-Jacketing Method (107-S64) Nov.-Dec. 2010 654
Cho, J.-Y. Shear Behavior of Large-Scale Post-Tensioned Girders with Small Shear Span-Depth Ratio (107-S13) Mar.-Apr. 2010 137
Choi, D.-U. Bar Pullout Tests and Seismic Tests of Small-Headed Bars in Beam-Column Joints (107-S04) Jan.-Feb. 2010 32
Choi, E. Behavior of Reinforced Concrete Columns Confined by New Steel-Jacketing Method (107-S64) Nov.-Dec. 2010 654
Choi, H. Experimental Study of Reinforced Concrete Bridge Columns Subjected to Near-Fault Ground Motions (107-S01) Jan.-Feb. 2010 3
Choi, K.-K.
—Creep Effects in Plain and Fiber-Reinforced Polymer-Strengthened Reinforced Concrete Beams (107-S61) Nov.-Dec. 2010 627
—Evaluation of Inelastic Deformation Capacity of Beams Subjected to Cyclic Loading (107-S49) Sept.-Oct. 2010 507
Chun, S.-C.
—Compression Lap Splice in Unconfined Concrete of 40 and 60 MPa (5800 and 8700 psi) Compressive Strengths (107-S17) Mar.-Apr. 2010 170
—Compression Splices in Confined Concrete of 40 and 60 MPa (5800 and 8700 psi) Compressive Strengths (107-S48) July-Aug. 2010 476
Chung, Y.-S. Behavior of Reinforced Concrete Columns Confined by New Steel-Jacketing Method (107-S64) Nov.-Dec. 2010 654
Cleland, D. Investigation of Ultimate Strength of Deck Slabs in Steel-Concrete Bridges (107-S09) Jan.-Feb. 2010 82
Cohen, I. E. Flexural Cracks in Fiber-Reinforced Concrete Beams with Fiber-Reinforced Polymer Reinforcing Bars (107-S31) May-June 2010 321
Collins, M. P. Behavior of Large Deep Beams Subjected to Monotonic and Reversed Cyclic Shear (107-S72) Nov.-Dec. 2010 726
Column(s)
—Behavior of Fiber-Reinforced Concrete Columns under Axially and Eccentrically Compressive Loads (107-S26) Campione, G.; Fossetti, M.; and Papia, M., May-June 2010 272
—Behavior of Full-Scale Glass Fiber-Reinforced Polymer Reinforced Concrete Columns under Axial Load (107-S58) De Luca, A., Matta, F.; and Nanni, A., Sept.-Oct. 2010 589
—Carbon Fiber-Reinforced Polymer Confined Reactive Powder Concrete Columns—Experimental Investigation (107-S25) Malik, A. R., and Foster, S. J., May-June 2010 263

—Nonlinear Stability Analysis of Concrete-Filled Fiber-Reinforced Polymer-Tube Columns: Experimental and Theoretical Investigation (107-69) Mohamed, H. M.; Abdel-Baky, H. M.; and Masmoudi, R., Nov.-Dec. 2010 699
—Performance of Reinforced Concrete Columns Designed for Flexure under Severe Displacement Cycles (107-S36) Acun, B., and Sucuoglu, H., May-June 2010 364
—Seismic Design of Reinforced Concrete Bridge Columns at Subfreezing Temperatures (107-S42) Montejo, L. A.; Marx, E.; and Kowalsky, M. J., July-Aug. 2010 427
—Seismic Shear Behavior of Lightweight Aggregate Concrete Square Columns (107-S67) Hendrix, S. E., and Kowalsky, M. J., Nov.-Dec. 2010 680
—Stress-Averaged Strain Model for Confined High-Strength Concrete (107-S18) Akiyama, M.; Suzuki, M.; and Frangopol, D. M., Mar.-Apr. 2010 179
Combined stress Spiral Post-Tensioning System for Concrete Members (107-S55) Krishnamra, N.; Limsuwan, E.; and Dawe, J., Sept.-Oct. 2010 563
Comparison of One- and Tw o-Way Slab Minimum Thickness Provisions in Building Codes and Standards (107-S15) Lee, Y. H., and Scanlon, A., Mar.-Apr. 2010 157
Composite beams Shear-Transfer Strength of Reinforced Concrete (107-S41) Rahal, K. N., July-Aug. 2010 419
Composites
—Flexural Cracks in Fiber-Reinforced Concrete Beams with Fiber-Reinforced Polymer Reinforcing Bars (107-S31) Lee, W. K.; Jansen, D. C.; Berlin, K. B.; and Cohen, I. E., May-June 2010 321
—Nonlinear Stability Analysis of Concrete-Filled Fiber-Reinforced Polymer-Tube Columns: Experimental and Theoretical Investigation (107-69) Mohamed, H. M.; Abdel-Baky, H. M.; and Masmoudi, R., Nov.-Dec. 2010 699
Compression Behavior of Full-Scale Glass Fiber-Reinforced Polymer Reinforced Concrete Columns under Axial Load (107-S58) De Luca, A., Matta, F.; and Nanni, A., Sept.-Oct. 2010 589
Compression lap splice
—Compression Lap Splice in Unconfined Concrete of 40 and 60 MPa (5800 and 8700 psi) Compressive Strengths (107-S17) Chun, S.-C.; Lee, S.-H.; and Oh, B., Mar.-Apr. 2010 170
—Compression Splices in Confined Concrete of 40 and 60 MPa (5800 and 8700 psi) Compressive Strengths (107-S48) Chun, S.-C.; Lee, S.-H.; and Oh, B., July-Aug. 2010 476
Compression Lap Splice in Unconfin ed Concrete of 40 and 60 MPa (5800 and 8700 psi) Compressive Strengths (107-S17) Chun, S.-C.; Lee, S.-H.; and Oh, B., Mar.-Apr. 2010 170
Compression Splices in Confined Concrete of 40 and 60 MPa (5800 and 8700 psi) Compressive Strengths (107-S48) Chun, S.-C.; Lee, S.-H.; and Oh, B., July-Aug. 2010 476
Compressive strength Investigation of Ultimate Strength of Deck Slabs in Steel-Concrete Bridges (107-S09) Zheng, Y.; Taylor, S.; Robinson, D.; and Cleland, D., Jan.-Feb. 2010 82
Compressive stress Effects of Increasing Allowable Compressive Stress at Prestress Transfer (107-S03) Birrcher, D. B.; Bayrak, O.; and Kreger, M. E., Jan.-Feb. 2010 21
Compressive tests Behavior of Fiber-Reinforced Concrete Columns under Axially and Eccentrically Compressive Loads (107-S26) Campione, G.; Fossetti, M.; and Papia, M., May-June 2010 272
Concrete beam Fatigue Behavior of Reinforced Concrete Beams with Corroded Steel Reinforcement (107-S51) Yi, W.-J.; Kunnath, S. K.; Sun, X.-D.; Shi, C.-J.; and Tang, F.-J., Sept.-Oct. 2010 526
Concrete compressive strength Interaction between Bond and Deviation Forces in Spalling Failures of Arch-Shaped Members without Transverse Reinforcement (107-S34) Fernández Ruiz, M.; Plumey, S.; and Muttoni, A., May-June 2010 346
Concrete slabs Shear Behavior of Concrete Slabs Longitudinally Reinforced with High-Performance Steel (107-S23) Desalegne, A. S., and Lubell, A. S., Mar.-Apr. 2010 228
Confined concrete Behavior of Fiber-Reinforced Concrete Columns under Axially and Eccentrically Compressive Loads (107-S26) Campione, G.; Fossetti, M.; and Papia, M., May-June 2010 272
Confinement
—Carbon Fiber-Reinforced Polymer Confined Reactive Powder Concrete Columns—Experimental Investigation (107-S25) Malik, A. R., and Foster, S. J., May-June 2010 263
—Stress-Averaged Strain Model for Confined High-Strength Concrete (107-S18) Akiyama, M.; Suzuki, M.; and Frangopol, D. M., Mar.-Apr. 2010 179
Confinement of Deep Beam Nodal Regions (107-S70) Tuchscherer, R.; Birrcher, D.; Huizinga, M.; and Bayrak, O., Nov.-Dec. 2010 709
Cook, W. D. Punching Shear Behavior of Two-Way Slabs Reinforced with High-Strength Steel (107-S47) July-Aug. 2010 468
Coronelli, D. Grid Model for Flat-Slab Structures (107-S63) Nov.-Dec. 2010 645
Corroded reinforcement Fatigue Behavior of Reinforced Concrete Beams with Corroded Steel Reinforcement (107-S51) Yi, W.-J.; Kunnath, S. K.; Sun, X.-D.; Shi, C.-J.; and Tang, F.-J., Sept.-Oct. 2010 526
Corrosion Reliability Safety Assessment of Corroding Reinforced Concrete Structures Based on Visual Inspection Information (107-S66) Stewart, M. G., Nov.-Dec. 2010 671
Cosenza, E. Nonlinear Analysis of Cross Sections under Axial Load and Biaxial Bending (107-S38) July-Aug. 2010 390
Crack Behavior near Reinforcing Bars in Concrete Structures (106-S25)
—Tammo, K., and Thelandersson, S., May-June 2009 259
—Disc. by Otieno, M. B., and Alexander, M. G., Mar.-Apr. 2010 248
Crack spacing New Formula to Calculate Crack Spacing for Concrete Plates, A (107-S05) Rizk, E., and Marzouk, H., Jan.-Feb. 2010 43
Crack width(s)
—Crack Width Estimation for Concrete Plates (107-S27) Marzouk, H.; Hossin, M.; and Hussein, A., May-June 2010 282
—Flexural Cracks in Fiber-Reinforced Concrete Beams with Fiber-Reinforced Polymer Reinforcing Bars (107-S31) Lee, W. K.; Jansen, D. C.; Berlin, K. B.; and Cohen, I. E., May-June 2010 321
—Interaction between Bond and Deviation Forces in Spalling Failures of Arch-Shaped Members without Transverse Reinforcement (107-S34) Fernández Ruiz, M.; Plumey, S.; and Muttoni, A., May-June 2010 346
—Strengthening of Flat Slabs Against Punching Shear Using Post-Installed Shear Reinforcement (107-S43) Fernández Ruiz, M.; Muttoni, A.; and Kunz, J., July-Aug. 2010 434
Crack Width Estimation for Concrete Plates (107-S27) Marzouk, H.; Hossin, M.; and Hussein, A., May-June 2010 282
Cracking
—Evaluation of Reinforced Concrete Deck Girder Bridge Bent Caps with 1950s Vintage Details: Analytical Methods (107-S53) Senturk, A. E., and Higgins, C., Sept.-Oct. 2010 544
—Evaluation of Reinforced Concrete Deck Girder Bridge Bent Caps with 1950s Vintage Details: Laboratory Tests (107-S52) Senturk, A. E., and Higgins, C., Sept.-Oct. 2010 534
—Influence of Effective Depth on Shear Strength of Concrete Beams—Experimental Study (107-S54) Sneed, L. H., and Ramirez, J. A., Sept.-Oct. 2010 554
—Performance Evaluation of Glass Fiber-Reinforced Polymer Shear Reinforcement for Concrete Beams (107-S06) Ahmed, E. A.; El-Salakawy, E. F.; and Benmokrane, B., Jan.-Feb. 2010 53
—Punching Shear Behavior of Two-Way Slabs Reinforced with High-Strength Steel (107-S47) Yang, J.-M.; Yoon, Y.-S.; Cook, W. D.; and Mitchell, D., July-Aug. 2010 468
—Reliability Safety Assessment of Corroding Reinforced Concrete Structures Based on Visual Inspection Information (107-S66) Stewart, M. G., Nov.-Dec. 2010 671
—Simple Rational Formulas for Cracking Torque and Twist of Reinforced Concrete Members (107-S19) Jeng, C.-H., Mar.-Apr. 2010 189
Crash simulation Performance of Retrofit Highway Barriers with Mechanical Anchors (107-S37) Mitchell, G.; Strahota, M. T.; Gokani, V.; Picón, R.; Yang, S.; Klingner, R. E.; and Williamson, E. B., July-Aug. 2010 381
Creep Creep Effects in Plain and Fiber-Reinforced Polymer-Strengthened Reinforced Concrete Beams (107-S61) Reda Taha, M. M.; Masia, M. J.; Choi, K.-K.; Shrive, P. L.; and Shrive, N. G., Nov.-Dec. 2010 627
Creep Effects in Plain and Fiber- Reinforced Polymer- Strengthened Reinforced Concrete Beams (107-S61) Reda Taha, M. M.; Masia, M. J.; Choi, K.-K.; Shrive, P. L.; and Shrive, N. G., Nov.-Dec. 2010 627
Critical shear-crack theory
—Influence of Shear on Rotation Capacity of Reinforced Concrete Members Without Shear Reinforcement (107-S50) Rodrigues, R. V.; Muttoni, A.; and Fernández Ruiz, M., Sept.-Oct. 2010 516

—Strengthening of Flat Slabs Against Punching Shear Using Post-Installed Shear Reinforcement (107-S43) Fernández Ruiz, M.; Muttoni, A.; and Kunz, J., July-Aug. 2010 434
Cross section Nonlinear Analysis of Cross Sections under Axial Load and Biaxial Bending (107-S38) Di Ludovico, M.; Lignola, G. P.; Prota, A.; and Cosenza, E., July-Aug. 2010 390
Curvature Stiffness of Reinforced Concrete Frame Members for Seismic Analysis (107-S60) Kumar, R., and Singh, Y., Sept.-Oct. 2010 607
Cyclic FEA Implementation of Smeared Cyclic Bond Slip-Based Two-Dimensional Membrane Model (107-S10) So, M.; Harmon, T. G.; and Dyke, S., Jan.-Feb. 2010 92
Cyclic loading
—Bar Pullout Tests and Seismic Tests of Small-Headed Bars in Beam-Column Joints (107-S04) Kang, T. H.-K.; Ha, S.-S.; and Choi, D.-U., Jan.-Feb. 2010 32
—Behavior of Large Deep Beams Subjected to Monotonic and Reversed Cyclic Shear (107-S72) Mihaylov, B. I.; Bentz, E. C.; and Collins, M. P., Nov.-Dec. 2010 726
Cyclic shear Evaluation of Inelastic Deformation Capacity of Beams Subjected to Cyclic Loading (107-S49) Choi, K.-K., and Park, H.-G., Sept.-Oct. 2010 507

D

Dawe, J. Spiral Post-Tensioning System for Concrete Members (107-S55) Sept.-Oct. 2010 563
De Luca, A. Behavior of Full-Scale Glass Fiber-Reinforced Polymer Reinforced Concrete Columns under Axial Load (107-S58) Sept.-Oct. 2010 589
de Souza, R. A. Carbon Fiber-Reinforced Polymer for Continuity in Existing Reinforced Concrete Buildings Vulnerable to Collapse (Disc. 106-S56) July-Aug. 2010 488
Debonding Ultimate Strength of Reinforced Concrete Beams Retrofitted with Hybrid Bonded Fiber-Reinforced Polymer (107-S45) Wu, Y.-F.; Yan, J.-H.; Zhou, Y.-W.; and Xiao, Y., July-Aug. 2010 451
Deep beam(s)
—Behavior of Large Deep Beams Subjected to Monotonic and Reversed Cyclic Shear (107-S72) Mihaylov, B. I.; Bentz, E. C.; and Collins, M. P., Nov.-Dec. 2010 726
—Confinement of Deep Beam Nodal Regions (107-S70) Tuchscherer, R.; Birrcher, D.; Huizinga, M.; and Bayrak, O., Nov.-Dec. 2010 709
—Evaluation of Reinforced Concrete Deck Girder Bridge Bent Caps with 1950s Vintage Details: Analytical Methods (107-S53) Senturk, A. E., and Higgins, C., Sept.-Oct. 2010 544
—Evaluation of Reinforced Concrete Deck Girder Bridge Bent Caps with 1950s Vintage Details: Laboratory Tests (107-S52) Senturk, A. E., and Higgins, C., Sept.-Oct. 2010 534
—Tests on Lightweight Concrete Deep Beams (107-S65) Yang, K.-H., Nov.-Dec. 2010 663
Deflection
—Comparison of One- and Two-Way Slab Minimum Thickness Provisions in Building Codes and Standards (107-S15) Lee, Y. H., and Scanlon, A., Mar.-Apr. 2010 157
—Creep Effects in Plain and Fiber-Reinforced Polymer-Strengthened Reinforced Concrete Beams (107-S61) Reda Taha, M. M.; Masia, M. J.; Choi, K.-K.; Shrive, P. L.; and Shrive, N. G., Nov.-Dec. 2010 627
Deformation Capacity of Reinforced Concrete Columns (106-S20)
—Mostafaei, H.; Vecchio, F. J.; and Kabeyasawa, T., Mar.-Apr. 2009 187
—Disc. by Windisch, A., Jan.-Feb. 2010 126
Desalegne, A. S. Shear Behavior of Concrete Slabs Longitudinally Reinforced with High-Performance Steel (107-S23) Mar.-Apr. 2010 228
Design Simple Rational Formulas for Cracking Torque and Twist of Reinforced Concrete Members (107-S19) Jeng, C.-H., Mar.-Apr. 2010 189
Di Ludovico, M. Nonlinear Analysis of Cross Sections under Axial Load and Biaxial Bending (107-S38) July-Aug. 2010 390
Diagonal crack width Shear Behavior of Large-Scale Post-Tensioned Girders with Small Shear Span-Depth Ratio (107-S13) Lee, S.-C.; Cho, J.-Y.; and Oh, B.-H., Mar.-Apr. 2010 137
Dinh, H. H. Shear Behavior of Steel Fiber-Reinforced Concrete Beams without Stirrup Reinforcement (107-S59) Sept.-Oct. 2010 597
Disproportionate collapse Gravity Load Redistribution and Progressive Collapse Resistance of 20-Story Reinforced Concrete Structure following Loss of Interior Column (107-S62) Sasani, M., and Sagiroglu, S., Nov.-Dec. 2010 636
Dissipated energy Seismic Behavior of 150 MPa (22 ksi) Concrete Flexural Elements (107-S30) Elmenshawi, A., and Brown, T., May-June 2010 311
Dowel action Seismic Design Method for Reinforced Concrete Two-Way Column Hinges (107-S56) Cheng, Z.-Y.; Saiid Saiidi, M.; and Sanders, D., Sept.-Oct. 2010 572
Drift capacity Grid Model for Flat-Slab Structures (107-S63) Coronelli, D., Nov.-Dec. 2010 645
Drift demand Performance of Reinforced Concrete Columns Designed for Flexure under Severe Displacement Cycles (107-S36) Acun, B., and Sucuoglu, H., May-June 2010 364
Ductility
—Influence of Shear on Rotation Capacity of Reinforced Concrete Members Without Shear Reinforcement (107-S50) Rodrigues, R. V.; Muttoni, A.; and Fernández Ruiz, M., Sept.-Oct. 2010 516
—Seismic Behavior of 150 MPa (22 ksi) Concrete Flexural Elements (107-S30) Elmenshawi, A., and Brown, T., May-June 2010 311
—Seismic Design of Reinforced Concrete Bridge Columns at Subfreezing Temperatures (107-S42) Montejo, L. A.; Marx, E.; and Kowalsky, M. J., July-Aug. 2010 427
—Shear Behavior of Steel Fiber-Reinforced Concrete Beams without Stirrup Reinforcement (107-S59) Dinh, H. H.; Parra-Montesinos, G. J.; and Wight, J. K., Sept.-Oct. 2010 597
Dyke, S. FEA Implementation of Smeared Cyclic Bond Slip-Based Two-Dimensional Membrane Model (107-S10) Jan.-Feb. 2010 92
Dynamic response
—Experimental Study of Reinforced Concrete Bridge Columns Subjected to Near-Fault Ground Motions (107-S01) Choi, H.; Saiid Saiidi, M.; Somerville, P.; and El-Azazy, S., Jan.-Feb. 2010 3
—Gravity Load Redistribution and Progressive Collapse Resistance of 20-Story Reinforced Concrete Structure following Loss of Interior Column (107-S62) Sasani, M., and Sagiroglu, S., Nov.-Dec. 2010 636

E

Earthquake design Evaluation of Inelastic Deformation Capacity of Beams Subjected to Cyclic Loading (107-S49) Choi, K.-K., and Park, H.-G., Sept.-Oct. 2010 507
Ebead, U. Modeling of Reinforced Concrete Slabs Strengthened with Fiber-Reinforced Polymer or Steel Plates (107-S22) Mar.-Apr. 2010 218
Effective stiffness Stiffness of Reinforced Concrete Frame Members for Seismic Analysis (107-S60) Kumar, R., and Singh, Y., Sept.-Oct. 2010 607
Effective Stiffness of Reinforced Concrete Columns (106-S45)
—Elwood, K. J., and Eberhard, M. O., July-Aug. 2009 476
—Disc. by Englekirk, R. E., May-June 2010 372
Effects of I ncreasing Allowable Compressive Stress at Prestress Transfer (107-S03) Birrcher, D. B.; Bayrak, O.; and Kreger, M. E., Jan.-Feb. 2010 21
El-Azazy, S. Experimental Study of Reinforced Concrete Bridge Columns Subjected to Near-Fault Ground Motions (107-S01) Jan.-Feb. 2010 3
El-Degwy, W. M. Boundary Element Method Calculation of Moment Transfer Parameters in Slab-Column Connections (107-S16) Mar.-Apr. 2010 164
Elmenshawi, A. Seismic Behavior of 150 MPa (22 ksi) Concrete Flexural Elements (107-S30) May-June 2010 311
El-Salakawy, E. F. Performance Evaluation of Glass Fiber-Reinforced Polymer Shear Reinforcement for Concrete Beams (107-S06) Jan.-Feb. 2010 53
Embedment length Bar Pullout Tests and Seismic Tests of Small-Headed Bars in Beam-Column Joints (107-S04) Kang, T. H.-K.; Ha, S.-S.; and Choi, D.-U., Jan.-Feb. 2010 32
Embedments Shear Behavior of Headed Anchors with Large Diameters and Deep Embedments (107-S14) Lee, N. H.; Park, K. R.; and Suh, Y. P., Mar.-Apr. 2010 146
End bearing
—Compression Lap Splice in Unconfined Concrete of 40 and 60 MPa (5800 and 8700 psi) Compressive Strengths (107-S17) Chun, S.-C.; Lee, S.-H.; and Oh, B., Mar.-Apr. 2010 170
—Compression Splices in Confined Concrete of 40 and 60 MPa (5800 and 8700 psi) Compressive Strengths (107-S48) Chun, S.-C.; Lee, S.-H.; and Oh, B., July-Aug. 2010 476
Englekirk, R. E. Effective Stiffness of Reinforced Concrete Columns (Disc. 106-S45) May-June 2010 372

Eom, T.-S. Secant Stiffness Method for Inelastic Design of Strut-and-Tie Model (107-S68) Nov.-Dec. 2010 689
Epoxy adhesive Creep Effects in Plain and Fiber-Reinforced Polymer-Strengthened Reinforced Concrete Beams (107-S61) Reda Taha, M. M.; Masia, M. J.; Choi, K.-K.; Shrive, P. L.; and Shrive, N. G., Nov.-Dec. 2010 627
Erdogmus, E. Fatigue Evaluation for Reinforced Concrete Box Culverts (107-S02) Jan.-Feb. 2010 13
Eskildsen, S. Measured Strains in Post-Tensioned Concrete Parking Deck Made with Shrinkage-Compensating Concrete (107-S71) Nov.-Dec. 2010 718
Evaluation of Bundled Bar Lap Splices (106-S23)
—Bashandy, T. R., Mar.-Apr. 2009 215
—Disc. by Windisch, A., Jan.-Feb. 2010 128
Evaluation of Inelastic Deformatio n Capacity of Beams Subjected to Cyclic Loading (107-S49) Choi, K.-K., and Park, H.-G., Sept.-Oct. 2010. . . 507
Evaluation of Load Transfer and Strut Strength of Deep Beams with Short Longitudinal Bar Anchorages (106-S63)
—Breña, S. F., and Roy, N. C., Sept.-Oct. 2009 678
—Disc. by Sahoo, D. K.; Singh, B.; and Bhargava, P., July-Aug. 2010. 491
Evaluation of Reinforced Concrete Deck Girder Bridge Bent Caps with 1950s Vintage Details: Analytical Methods (107-S53) Senturk, A. E., and Higgins, C., Sept.-Oct. 2010. 544
Evaluation of Reinforced Concrete Deck Girder Bridge Bent Caps with 1950s Vintage Details: Laboratory Tests (107-S52) Senturk, A. E., and Higgins, C., Sept.-Oct. 2010 534
Evaluation of Steel Fiber Reinforcement for Punching Shear Resistance in Slab-Column Connections—Part I: Monotonically Increased Load (107-S11) Cheng, M.-Y., and Parra-Montesinos, G. J., Jan.-Feb. 2010 101
Evaluation of Steel F iber Rein forcement for Punching Shear Resistance in Slab-Column Connections—Part II: Lateral Displacement Reversals (107-S12) Cheng, M.-Y., and Parra-Montesinos, G. J., Jan.-Feb. 2010 110
Experimental and Analytical Evaluation of Reinforced Concrete Girders under Low-Cycle Shear Fatigue (107-S20) Forrest, R. W. B.; Higgins, C.; and Senturk, A. E., Mar.-Apr. 2010 199
Experimental Study of Reinfo rced Concrete Bridge Columns Subjected to Near-Fault Ground Motions (107-S01) Choi, H.; Saiid Saiidi, M.; Somerville, P.; and El-Azazy, S., Jan.-Feb. 2010 3
Experiments on Reinforced Bric k Masonry Vaulted Light Roofs (107-S35) López-Almansa, F.; Roca, P.; Sarrablo, V.; Cahís, X.; and Canet, J. M., May-June 2010. 355
External pressure Behavior of Reinforced Concrete Columns Confined by New Steel-Jacketing Method (107-S64) Choi, E.; Chung, Y.-S.; Park, J.; and Cho, B.-S., Nov.-Dec. 2010 654
External pres tressing Shear Behavior of Externally Prestressed Beams with Carbon Fiber-Reinforced Polymer Tendons (107-S44) Ng, S. T. K., and Soudki, K., July-Aug. 2010 443

F

Failure criteria Evaluation of Inelastic Deformation Capacity of Beams Subjected to Cyclic Loading (107-S49) Choi, K.-K., and Park, H.-G., Sept.-Oct. 2010 507
Failure criterion Ultimate Strength of Reinforced Concrete Beams Retrofitted with Hybrid Bonded Fiber-Reinforced Polymer (107-S45) Wu, Y.-F.; Yan, J.-H.; Zhou, Y.-W.; and Xiao, Y., July-Aug. 2010 451
Failure modes Maximum Shear Reinforcement of Reinforced Concrete Beams (107-S57) Lee, J.-Y., and Hwang, H.-B., Sept.-Oct. 2010 580
Fatigue
—Experimental and Analytical Evaluation of Reinforced Concrete Girders under Low-Cycle Shear Fatigue (107-S20) Forrest, R. W. B.; Higgins, C.; and Senturk, A. E., Mar.-Apr. 2010 199
—Fatigue Evaluation for Reinforced Concrete Box Culverts (107-S02) Maximos, H.; Erdogmus, E.; and Tadros, M. K., Jan.-Feb. 2010 13
Fatigue Behavior of Reinforced Concrete Beams with Corroded Steel Reinforcement (107-S51) Yi, W.-J.; Kunnath, S. K.; Sun, X.-D.; Shi, C.-J.; and Tang, F.-J., Sept.-Oct. 2010 526
Fatigue Evaluation for Reinforced Concrete Box Culverts (107-S02) Maximos, H.; Erdogmus, E.; and Tadros, M. K., Jan.-Feb. 2010. 13
Fatigue test Fatigue Behavior of Reinforced Concrete Beams with Corroded Steel Reinforcement (107-S51) Yi, W.-J.; Kunnath, S. K.; Sun, X.-D.; Shi, C.-J.; and Tang, F.-J., Sept.-Oct. 2010 526
FEA implementation FEA Implementation of Smeared Cyclic Bond Slip-Based Two-Dimensional Membrane Model (107-S10) So, M.; Harmon, T. G.; and Dyke, S., Jan.-Feb. 2010. 92
FEA Implementation of Smeared Cyclic Bond Slip-Based Two-Dimensional Membrane Model (107-S10) So, M.; Harmon, T. G.; and Dyke, S., Jan.-Feb. 2010 92
Fernández Ruiz, M.
—Influence of Shear on Rotation Capacity of Reinforced Concrete Members Without Shear Reinforcement (107-S50) Sept.-Oct. 2010 516
—Interaction between Bond and Deviation Forces in Spalling Failures of Arch-Shaped Members without Transverse Reinforcement (107-S34) May-June 2010 346
—Reinforced Concrete Slab Shear Prediction Competition: Entries and Discussion (Disc. 106-S30) Mar.-Apr. 2010. 250
—Strengthening of Flat Slabs Against Punching Shear Using Post-Installed Shear Reinforcement (107-S43) July-Aug. 2010 434
Fiber Analytical Modeling of Medium-Rise Reinforced Concrete Shear Walls (107-S39) Jiang, H., and Kurama, Y. C., July-Aug. 2010 400
Fiber model Pushover Analysis of Shear-Critical Frames: Formulation (107-S07) Guner, S., and Vecchio, F. J., Jan.-Feb. 2010 63
Fiber reinforcement Evaluation of Steel Fiber Reinforcement for Punching Shear Resistance in Slab-Column Connections—Part I: Monotonically Increased Load (107-S11) Cheng, M.-Y., and Parra-Montesinos, G. J., Jan.-Feb. 2010 101
Fiber-reinforced concrete
—Flexural Cracks in Fiber-Reinforced Concrete Beams with Fiber-Reinforced Polymer Reinforcing Bars (107-S31) Lee, W. K.; Jansen, D. C.; Berlin, K. B.; and Cohen, I. E., May-June 2010 321
—Punching Shear Behavior of Two-Way Slabs Reinforced with High-Strength Steel (107-S47) Yang, J.-M.; Yoon, Y.-S.; Cook, W. D.; and Mitchell, D., July-Aug. 2010. 468
—Shear Behavior of Steel Fiber-Reinforced Concrete Beams without Stirrup Reinforcement (107-S59) Dinh, H. H.; Parra-Montesinos, G. J.; and Wight, J. K., Sept.-Oct. 2010 597
Fiber-reinforced polymer(s)
—Analytical Model for Fiber-Reinforced Polymer-Jacketed Square Concrete Columns in Axial Compression (107-S21) Lee, C.-S.; Hegemier, G. A.; and Phillippi, D. J., Mar.-Apr. 2010. 208
—Creep Effects in Plain and Fiber-Reinforced Polymer-Strengthened Reinforced Concrete Beams (107-S61) Reda Taha, M. M.; Masia, M. J.; Choi, K.-K.; Shrive, P. L.; and Shrive, N. G., Nov.-Dec. 2010 627
—Flexural Cracks in Fiber-Reinforced Concrete Beams with Fiber-Reinforced Polymer Reinforcing Bars (107-S31) Lee, W. K.; Jansen, D. C.; Berlin, K. B.; and Cohen, I. E., May-June 2010 321
—Modeling of Reinforced Concrete Slabs Strengthened with Fiber-Reinforced Polymer or Steel Plates (107-S22) Ebead, U., and Saeed, H., Mar.-Apr. 2010. 218
—Nonlinear Stability Analysis of Concrete-Filled Fiber-Reinforced Polymer-Tube Columns: Experimental and Theoretical Investigation (107-69) Mohamed, H. M.; Abdel-Baky, H. M.; and Masmoudi, R., Nov.-Dec. 2010. 699
—Performance Evaluation of Glass Fiber-Reinforced Polymer Shear Reinforcement for Concrete Beams (107-S06) Ahmed, E. A.; El-Salakawy, E. F.; and Benmokrane, B., Jan.-Feb. 2010 53
Fiber-reinforced polymer tendons Shear Behavior of Externally Prestressed Beams with Carbon Fiber-Reinforced Polymer Tendons (107-S44) Ng, S. T. K., and Soudki, K., July-Aug. 2010. 443
Field measurement Measured Strains in Post-Tensioned Concrete Parking Deck Made with Shrinkage-Compensating Concrete (107-S71) Richardson, J.; Eskildsen, S.; Schiller, B.; and Jones, M., Nov.-Dec. 2010. 718
Finite element analysis Modeling of Reinforced Concrete Slabs Strengthened with Fiber-Reinforced Polymer or Steel Plates (107-S22) Ebead, U., and Saeed, H., Mar.-Apr. 2010 218
Finite elements Performance of Retrofit Highway Barriers with Mechanical Anchors (107-S37) Mitchell, G.; Strahota, M. T.; Gokani, V.; Picón, R.; Yang, S.; Klingner, R. E.; and Williamson, E. B., July-Aug. 2010. 381
Flat plates Boundary Element Method Calculation of Moment Transfer Parameters in Slab-Column Connections (107-S16) Nazief, M. A.; Rashed, Y. F.; and El-Degwy, W. M., Mar.-Apr. 2010 164
Flat slabs Grid Model for Flat-Slab Structures (107-S63) Coronelli, D., Nov.-Dec. 2010. 645
Flexural cracking Effects of Increasing Allowable Compressive Stress at Prestress Transfer (107-S03) Birrcher, D. B.; Bayrak, O.; and Kreger, M. E., Jan.-Feb. 2010 21

Flexural Cracks in Fiber-Reinfo rced Concrete Be ams with Fiber-Reinforced Polymer Reinforcing Bars (107-S31) Lee, W. K.; Jansen, D. C.; Berlin, K. B.; and Cohen, I. E., May-June 2010 321
Flexural rigidity Seismic Behavior of 150 MPa (22 ksi) Concrete Flexural Elements (107-S30) Elmenshawi, A., and Brown, T., May-June 2010 311
Flexural stiffness Stiffness of Reinforced Concrete Frame Members for Seismic Analysis (107-S60) Kumar, R., and Singh, Y., Sept.-Oct. 2010 607
Flexure Performance of Reinforced Concrete Columns Designed for Flexure under Severe Displacement Cycles (107-S36) Acun, B., and Sucuoglu, H., May-June 2010 364
Forrest, R. W. B. Experimental and Analytical Evaluation of Reinforced Concrete Girders under Low-Cycle Shear Fatigue (107-S20) Mar.-Apr. 2010 199
Fossetti, M. Behavior of Fiber-Reinforced Concrete Columns under Axially and Eccentrically Compressive Loads (107-S26) May-June 2010 272
Foster, S. J. Carbon Fiber-Reinforced Polymer Confined Reactive Powder Concrete Columns—Experimental Investigation (107-S25) May-June 2010 263
Frame Pushover Analysis of Shear-Critical Frames: Verification and Application (107-S08) Guner, S., and Vecchio, F. J., Jan.-Feb. 2010 . . 72
Frame structure Pushover Analysis of Shear-Critical Frames: Formulation (107-S07) Guner, S., and Vecchio, F. J., Jan.-Feb. 2010 63
Frangopol, D. M. Stress-Averaged Strain Model for Confined High-Strength Concrete (107-S18) Mar.-Apr. 2010 179
Friction FEA Implementation of Smeared Cyclic Bond Slip-Based Two-Dimensional Membrane Model (107-S10) So, M.; Harmon, T. G.; and Dyke, S., Jan.-Feb. 2010 92
FRP reinforcement Behavior of Full-Scale Glass Fiber-Reinforced Polymer Reinforced Concrete Columns under Axial Load (107-S58) De Luca, A., Matta, F.; and Nanni, A., Sept.-Oct. 2010 589
Full-scale Behavior of Full-Scale Glass Fiber-Reinforced Polymer Reinforced Concrete Columns under Axial Load (107-S58) De Luca, A., Matta, F.; and Nanni, A., Sept.-Oct. 2010 589
Full-scale te sts Shear Strengths of Prestressed Concrete Beams Part 1: Experiments and Shear Design Equations (107-S32) Laskar, A.; Hsu, T. T. C.; and Mo, Y. L., May-June 2010 330

G

Gardner, J. Two-Way Shear Strength of Slab-Column Connections: Reexamination of ACI 318 Provisions (Disc. 106-S17) Jan.-Feb. 2010 . . 120
Girder Experimental and Analytical Evaluation of Reinforced Concrete Girders under Low-Cycle Shear Fatigue (107-S20) Forrest, R. W. B.; Higgins, C.; and Senturk, A. E., Mar.-Apr. 2010 199
Glass fibers Behavior of Full-Scale Glass Fiber-Reinforced Polymer Reinforced Concrete Columns under Axial Load (107-S58) De Luca, A., Matta, F.; and Nanni, A., Sept.-Oct. 2010 589
Gokani, V. Performance of Retrofit Highway Barriers with Mechanical Anchors (107-S37) July-Aug. 2010 381
Goudarzi, N. Transverse Resistance of Masonry Infills (107-S46) July-Aug. 2010 461
Gravity Load Redistribution and Progressive Collapse Resistance of 20-Story Reinforced Concrete Stru cture following Loss of Interior Column (107-S62) Sasani, M., and Sagiroglu, S., Nov.-Dec. 2010 . . 636
Grid Model for Flat-Slab Structures (107-S63) Coronelli, D., Nov.-Dec. 2010 645
Grid models Grid Model for Flat-Slab Structures (107-S63) Coronelli, D., Nov.-Dec. 2010 645
Grouting Behavior of Reinforced Concrete Columns Confined by New Steel-Jacketing Method (107-S64) Choi, E.; Chung, Y.-S.; Park, J.; and Cho, B.-S., Nov.-Dec. 2010 654
Guner, S.
—Pushover Analysis of Shear-Critical Frames: Formulation (107-S07) Jan.-Feb. 2010 63
—Pushover Analysis of Shear-Critical Frames: Verification and Application (107-S08) Jan.-Feb. 2010 72

H

Ha, S.-S. Bar Pullout Tests and Seismic Tests of Small-Headed Bars in Beam-Column Joints (107-S04) Jan.-Feb. 2010 32
Hansen, S. Shear Strength of Reinforced Concrete Slender Beams with or without Axial Forces—A Generalized Theory (Disc. 106-S72) Sept.-Oct. 2010 616
Harmon, T. G. FEA Implementation of Smeared Cyclic Bond Slip-Based Two-Dimensional Membrane Model (107-S10) Jan.-Feb. 2010 92
He, Q. Progressive Collapse Resistance to Axially-Restrained Frame Beams (Disc. 106-S55) July-Aug. 2010 486
Headed Shear Reinforcement Assemblies for One-Way Shear (106-S82)
—Lubell, A. S.; Bentz, E. C.; and Collins, M. P., Nov.-Dec. 2009 878
—Disc. by Ansley, M., Sept.-Oct. 2010 617
—Disc. by Windisch, A., Sept.-Oct. 2010 617
Hegemier, G. A. Analytical Model for Fiber-Reinforced Polymer-Jacketed Square Concrete Columns in Axial Compression (107-S21) Mar.-Apr. 2010 208
Hendrix, S. E. Seismic Shear Behavior of Lightweight Aggregate Concrete Square Columns (107-S67) Nov.-Dec. 2010 680
Higgins, C.
—Evaluation of Reinforced Concrete Deck Girder Bridge Bent Caps with 1950s Vintage Details: Laboratory Tests (107-S52) Sept.-Oct. 2010 . . . 534
—Evaluation of Reinforced Concrete Deck Girder Bridge Bent Caps with 1950s Vintage Details: Analytical Methods (107-S53) Sept.-Oct. 2010 544
—Experimental and Analytical Evaluation of Reinforced Concrete Girders under Low-Cycle Shear Fatigue (107-S20) Mar.-Apr. 2010 199
High-performance steel Shear Behavior of Concrete Slabs Longitudinally Reinforced with High-Performance Steel (107-S23) Desalegne, A. S., and Lubell, A. S., Mar.-Apr. 2010 228
High-strength concrete
—Crack Width Estimation for Concrete Plates (107-S27) Marzouk, H.; Hossin, M.; and Hussein, A., May-June 2010 282
—Maximum Shear Reinforcement of Reinforced Concrete Beams (107-S57) Lee, J.-Y., and Hwang, H.-B., Sept.-Oct. 2010 580
—Seismic Behavior of 150 MPa (22 ksi) Concrete Flexural Elements (107-S30) Elmenshawi, A., and Brown, T., May-June 2010 311
—Stress-Averaged Strain Model for Confined High-Strength Concrete (107-S18) Akiyama, M.; Suzuki, M.; and Frangopol, D. M., Mar.-Apr. 2010 179
High-strength reinforcement Punching Shear Behavior of Two-Way Slabs Reinforced with High-Strength Steel (107-S47) Yang, J.-M.; Yoon, Y.-S.; Cook, W. D.; and Mitchell, D., July-Aug. 2010 468
High-strength steel Stress-Averaged Strain Model for Confined High-Strength Concrete (107-S18) Akiyama, M.; Suzuki, M.; and Frangopol, D. M., Mar.-Apr. 2010 179
Hoang, L. C. Shear Strength of Reinforced Concrete Slender Beams with or without Axial Forces—A Generalized Theory (Disc. 106-S72) Sept.-Oct. 2010 616
Hooked steel fibers Shear Behavior of Steel Fiber-Reinforced Concrete Beams without Stirrup Reinforcement (107-S59) Dinh, H. H.; Parra-Montesinos, G. J.; and Wight, J. K., Sept.-Oct. 2010 597
Hoop strain Analytical Model for Fiber-Reinforced Polymer-Jacketed Square Concrete Columns in Axial Compression (107-S21) Lee, C.-S.; Hegemier, G. A.; and Phillippi, D. J., Mar.-Apr. 2010 208
Hossin, M. Crack Width Estimation for Concrete Plates (107-S27) May-June 2010 282
Hsu, T. T. C.
—Shear Strengths of Prestressed Concrete Beams Part 1: Experiments and Shear Design Equations (107-S32) May-June 2010 330
—Shear Strengths of Prestressed Concrete Beams Part 2: Comparisons with ACI and AASHTO Provisions (107-S33) May-June 2010 340
Huizinga, M. Confinement of Deep Beam Nodal Regions (107-S70) Nov.-Dec. 2010 709
Hussein, A. Crack Width Estimation for Concrete Plates (107-S27) May-June 2010 282
Hwang, H.-B. Maximum Shear Reinforcement of Reinforced Concrete Beams (107-S57) Sept.-Oct. 2010 580

I

Ilki, A. Behavior of Deficient Joints with Plain Bars and Low-Strength Concrete (107-S29) May-June 2010 300
Influence of Effective Depth on Sh ear Strength of Concrete Beams—Experimental Study (107-S54) Sneed, L. H., and Ramirez, J. A., Sept.-Oct. 2010 554
Influence of Shear on Rotation Capacity of Reinforced Concrete Members Without Shear Reinforcement (107-S50) Rodrigues, R. V.; Muttoni, A.; and Fernández Ruiz, M., Sept.-Oct. 2010 516

Inspection Reliability Safety Assessment of Corroding Reinforced Concrete Structures Based on Visual Inspection Information (107-S66) Stewart, M. G., Nov.-Dec. 2010 671

Interaction between Bond and Deviation Forces in Spalling Failures of Arch-Shaped Members without Transverse Reinforcement (107-S34) Fernández Ruiz, M.; Plumey, S.; and Muttoni, A., May-June 2010 . . . 346

Interfacial behavior Modeling of Reinforced Concrete Slabs Strengthened with Fiber-Reinforced Polymer or Steel Plates (107-S22) Ebead, U., and Saeed, H., Mar.-Apr. 2010 218

Interfacial str ength Ultimate Strength of Reinforced Concrete Beams Retrofitted with Hybrid Bonded Fiber-Reinforced Polymer (107-S45) Wu, Y.-F.; Yan, J.-H.; Zhou, Y.-W.; and Xiao, Y., July-Aug. 2010 451

Investigation of Dispersion of Compression in Bottle-Shaped Struts (106-S19)

—Sahoo, D. K.; Singh, B.; and Bhargava, P., Mar.-Apr. 2009 178

—Disc. by Windisch, A., Jan.-Feb. 2010 124

Investigation of Ultimate Strength of Deck Slabs in Steel-Concrete Bridges (107-S09)

—Zheng, Y.; Taylor, S.; Robinson, D.; and Cleland, D., Jan.-Feb. 2010 82

—Disc. by Jackson, P., Nov.-Dec. 2010 747

J

Jackson, P. Investigation of Ultimate Strength of Deck Slabs in Steel-Concrete Bridges (Disc. 107-S09) Nov.-Dec. 2010 747

Jansen, D. C. Flexural Cracks in Fiber-Reinforced Concrete Beams with Fiber-Reinforced Polymer Reinforcing Bars (107-S31) May-June 2010 321

Jeng, C.-H. Simple Rational Formulas for Cracking Torque and Twist of Reinforced Concrete Members (107-S19) Mar.-Apr. 2010 189

Jiang, H. Analytical Modeling of Medium-Rise Reinforced Concrete Shear Walls (107-S39) July-Aug. 2010 400

Jirsa, J. O. Seismic Rehabilitation of Slab-Column Connections (107-S24) Mar.-Apr. 2010 237

Joint Bar Pullout Tests and Seismic Tests of Small-Headed Bars in Beam-Column Joints (107-S04) Kang, T. H.-K.; Ha, S.-S.; and Choi, D.-U., Jan.-Feb. 2010 32

Jones, M. Measured Strains in Post-Tensioned Concrete Parking Deck Made with Shrinkage-Compensating Concrete (107-S71) Nov.-Dec. 2010 718

K

Kang, T. H.-K. Bar Pullout Tests and Seismic Tests of Small-Headed Bars in Beam-Column Joints (107-S04) Jan.-Feb. 2010 32

Kazemi, M. T. Smeared Rotating Crack Model for Reinforced Concrete Membrane Elements (107-S40) July-Aug. 2010 411

Klingner, R. E. Performance of Retrofit Highway Barriers with Mechanical Anchors (107-S37) July-Aug. 2010 381

Kowalsky, M. J.

—Relationship between Strain, Curvature, and Drift in Reinforced Concrete Moment Frames in Support of Performance-Based Seismic Design (107-S28) May-June 2010 291

—Seismic Design of Reinforced Concrete Bridge Columns at Subfreezing Temperatures (107-S42) July-Aug. 2010 427

—Seismic Shear Behavior of Lightweight Aggregate Concrete Square Columns (107-S67) Nov.-Dec. 2010 680

Kreger, M. E. Effects of Increasing Allowable Compressive Stress at Prestress Transfer (107-S03) Jan.-Feb. 2010 21

Krishnamra, N. Spiral Post-Tensioning System for Concrete Members (107-S55) Sept.-Oct. 2010 563

Kumar, R. Stiffness of Reinforced Concrete Frame Members for Seismic Analysis (107-S60) Sept.-Oct. 2010 607

Kumbasar, N. Behavior of Deficient Joints with Plain Bars and Low-Strength Concrete (107-S29) May-June 2010 300

Kunnath, S. K. Fatigue Behavior of Reinforced Concrete Beams with Corroded Steel Reinforcement (107-S51) Sept.-Oct. 2010 526

Kunz, J. Strengthening of Flat Slabs Against Punching Shear Using Post-Installed Shear Reinforcement (107-S43) July-Aug. 2010 434

Kurama, Y. C. Analytical Modeling of Medium-Rise Reinforced Concrete Shear Walls (107-S39) July-Aug. 2010 400

L

Laboratory tests Evaluation of Reinforced Concrete Deck Girder Bridge Bent Caps with 1950s Vintage Details: Laboratory Tests (107-S52) Senturk, A. E., and Higgins, C., Sept.-Oct. 2010 534

Laskar, A.

—Shear Strengths of Prestressed Concrete Beams Part 1: Experiments and Shear Design Equations (107-S32) May-June 2010 330

—Shear Strengths of Prestressed Concrete Beams Part 2: Comparisons with ACI and AASHTO Provisions (107-S33) May-June 2010 340

Lateral loading Seismic Design Method for Reinforced Concrete Two-Way Column Hinges (107-S56) Cheng, Z.-Y.; Saiid Saiidi, M.; and Sanders, D., Sept.-Oct. 2010 572

Lateral loads Grid Model for Flat-Slab Structures (107-S63) Coronelli, D., Nov.-Dec. 2010 645

Lee, C.-S. Analytical Model for Fiber-Reinforced Polymer-Jacketed Square Concrete Columns in Axial Compression (107-S21) Mar.-Apr. 2010 208

Lee, J.-Y. Maximum Shear Reinforcement of Reinforced Concrete Beams (107-S57) Sept.-Oct. 2010 580

Lee, N. H. Shear Behavior of Headed Anchors with Large Diameters and Deep Embedments (107-S14) Mar.-Apr. 2010 146

Lee, S.-C. Shear Behavior of Large-Scale Post-Tensioned Girders with Small Shear Span-Depth Ratio (107-S13) Mar.-Apr. 2010 137

Lee, S.-H.

—Compression Lap Splice in Unconfined Concrete of 40 and 60 MPa (5800 and 8700 psi) Compressive Strengths (107-S17) Mar.-Apr. 2010 170

—Compression Splices in Confined Concrete of 40 and 60 MPa (5800 and 8700 psi) Compressive Strengths (107-S48) July-Aug. 2010 476

Lee, W. K. Flexural Cracks in Fiber-Reinforced Concrete Beams with Fiber-Reinforced Polymer Reinforcing Bars (107-S31) May-June 2010 . . . 321

Lee, Y. H. Comparison of One- and Two-Way Slab Minimum Thickness Provisions in Building Codes and Standards (107-S15) Mar.-Apr. 2010 . . . 157

Light roofs Experiments on Reinforced Brick Masonry Vaulted Light Roofs (107-S35) López-Almansa, F.; Roca, P.; Sarrablo, V.; Cahís, X.; and Canet, J. M., May-June 2010 355

Lightweight concrete Tests on Lightweight Concrete Deep Beams (107-S65) Yang, K.-H., Nov.-Dec. 2010 663

Lignola, G. P. Nonlinear Analysis of Cross Sections under Axial Load and Biaxial Bending (107-S38) July-Aug. 2010 390

Limit Performance of Reinforced Concrete Columns Designed for Flexure under Severe Displacement Cycles (107-S36) Acun, B., and Sucuoglu, H., May-June 2010 364

Limit states Relationship between Strain, Curvature, and Drift in Reinforced Concrete Moment Frames in Support of Performance-Based Seismic Design (107-S28) Vidot-Vega, A. L., and Kowalsky, M. J., May-June 2010 291

Limsuwan, E. Spiral Post-Tensioning System for Concrete Members (107-S55) Sept.-Oct. 2010 563

Liu, J. Pushover Analysis of Shear-Critical Frames: Verification and Application (Disc. 107-S08) Nov.-Dec. 2010 744

Load Fatigue Evaluation for Reinforced Concrete Box Culverts (107-S02) Maximos, H.; Erdogmus, E.; and Tadros, M. K., Jan.-Feb. 2010 13

Load redistribution Gravity Load Redistribution and Progressive Collapse Resistance of 20-Story Reinforced Concrete Structure following Loss of Interior Column (107-S62) Sasani, M., and Sagiroglu, S., Nov.-Dec 2010 636

Load resistance Gravity Load Redistribution and Progressive Collapse Resistance of 20-Story Reinforced Concrete Structure following Loss of Interior Column (107-S62) Sasani, M., and Sagiroglu, S., Nov.-Dec. 2010 636

Load-deformation response Smeared Rotating Crack Model for Reinforced Concrete Membrane Elements (107-S40) Broujerdian, V., and Kazemi, M. T., July-Aug. 2010 411

Loading tests Experiments on Reinforced Brick Masonry Vaulted Light Roofs (107-S35) López-Almansa, F.; Roca, P.; Sarrablo, V.; Cahís, X.; and Canet, J. M., May-June 2010 355

Localization Stress-Averaged Strain Model for Confined High-Strength Concrete (107-S18) Akiyama, M.; Suzuki, M.; and Frangopol, D. M., Mar.-Apr. 2010 179

López-Almansa, F. Experiments on Reinforced Brick Masonry Vaulted Light Roofs (107-S35) May-June 2010 355

Low-strength concrete Behavior of Deficient Joints with Plain Bars and Low-Strength Concrete (107-S29) Bedirhanoglu, I.; Ilki, A.; Pujol, S.; and Kumbasar, N., May-June 2010 300

Lubell, A. S. Shear Behavior of Concrete Slabs Longitudinally Reinforced with High-Performance Steel (107-S23) Mar.-Apr. 2010 228

M

Madsen, M. B. Shear Strength of Reinforced Concrete Slender Beams with or without Axial Forces—A Generalized Theory (Disc. 106-S72) Sept.-Oct. 2010 616

Malik, A. R. Carbon Fiber-Reinforced Polymer Confined Reactive Powder Concrete Columns—Experimental Investigation (107-S25) May-June 2010 263

Marx, E. Seismic Design of Reinforced Concrete Bridge Columns at Subfreezing Temperatures (107-S42) July-Aug. 2010 427

Marzouk, H.

—Crack Width Estimation for Concrete Plates (107-S27) May-June 2010 282

—New Formula to Calculate Crack Spacing for Concrete Plates, A (107-S05) Jan.-Feb. 2010 43

Masia, M. J. Creep Effects in Plain and Fiber-Reinforced Polymer-Strengthened Reinforced Concrete Beams (107-S61) Nov.-Dec. 2010 627

Masmoudi, R. Nonlinear Stability Analysis of Concrete-Filled Fiber-Reinforced Polymer-Tube Columns: Experimental and Theoretical Investigation (107-69) Nov.-Dec. 2010 699

Masonry infill Transverse Resistance of Masonry Infills (107-S46) Moghaddam, H., and Goudarzi, N., July-Aug. 2010 461

Material modeling Smeared Rotating Crack Model for Reinforced Concrete Membrane Elements (107-S40) Broujerdian, V., and Kazemi, M. T., July-Aug. 2010 411

Matta, F. Behavior of Full-Scale Glass Fiber-Reinforced Polymer Reinforced Concrete Columns under Axial Load (107-S58) Sept.-Oct. 2010 589

Maximos, H. Fatigue Evaluation for Reinforced Concrete Box Culverts (107-S02) Jan.-Feb. 2010 13

Maximum amount of shear reinforcement Maximum Shear Reinforcement of Reinforced Concrete Beams (107-S57) Lee, J.-Y., and Hwang, H.-B., Sept.-Oct. 2010. 580

Maximum Shear Reinforcement of Reinforced Concrete Beams (107-S57) Lee, J.-Y., and Hwang, H.-B., Sept.-Oct. 2010. 580

Measured St rains in Pos t-Tensioned Concrete Parking Deck Made with Shrinkage-Compensating Concrete (107-S71) Richardson, J.; Eskildsen, S.; Schiller, B.; and Jones, M., Nov.-Dec. 2010 718

Membrane Investigation of Ultimate Strength of Deck Slabs in Steel-Concrete Bridges (107-S09) Zheng, Y.; Taylor, S.; Robinson, D.; and Cleland, D., Jan.-Feb. 2010 82

Membrane element Smeared Rotating Crack Model for Reinforced Concrete Membrane Elements (107-S40) Broujerdian, V., and Kazemi, M. T., July-Aug. 2010 411

Mihaylov, B. I. Behavior of Large Deep Beams Subjected to Monotonic and Reversed Cyclic Shear (107-S72) Nov.-Dec. 2010. 726

Minimum thickness Comparison of One- and Two-Way Slab Minimum Thickness Provisions in Building Codes and Standards (107-S15) Lee, Y. H., and Scanlon, A., Mar.-Apr. 2010 157

Mitchell, D. Punching Shear Behavior of Two-Way Slabs Reinforced with High-Strength Steel (107-S47) July-Aug. 2010 468

Mitchell, G. Performance of Retrofit Highway Barriers with Mechanical Anchors (107-S37) July-Aug. 2010 381

Mo, Y. L.

—Shear Strengths of Prestressed Concrete Beams Part 1: Experiments and Shear Design Equations (107-S32) May-June 2010 330

—Shear Strengths of Prestressed Concrete Beams Part 2: Comparisons with ACI and AASHTO Provisions (107-S33) May-June 2010 340

Modeling

—Pushover Analysis of Shear-Critical Frames: Verification and Application (107-S08) Guner, S., and Vecchio, F. J., Jan.-Feb. 2010 72

—Ultimate Strength of Reinforced Concrete Beams Retrofitted with Hybrid Bonded Fiber-Reinforced Polymer (107-S45) Wu, Y.-F.; Yan, J.-H.; Zhou, Y.-W.; and Xiao, Y., July-Aug. 2010 451

Modeling of Reinforced Concrete Slabs Strengthened with Fiber-Reinforced Polymer or Steel Plates (107-S22) Ebead, U., and Saeed, H., Mar.-Apr. 2010 218

Moghaddam, H. Transverse Resistance of Masonry Infills (107-S46) July-Aug. 2010 461

Mohamed, H. M. Nonlinear Stability Analysis of Concrete-Filled Fiber-Reinforced Polymer-Tube Columns: Experimental and Theoretical Investigation (107-69) Nov.-Dec. 2010 699

Moment transfer Seismic Rehabilitation of Slab-Column Connections (107-S24) Widianto; Bayrak, O.; Jirsa, J. O.; and Tian, Y., Mar.-Apr. 2010 237

Moment transfer parameters Boundary Element Method Calculation of Moment Transfer Parameters in Slab-Colum: Connections (107-S16) Nazief, M. A.; Rashed, Y. F.; and El-Degwy, W. M., Mar.-Apr. 2010 164

Moment-curvature Nonlinear Analysis of Cross Sections under Axial Load and Biaxial Bending (107-S38) Di Ludovico, M.; Lignola, G. P.; Prota, A.; and Cosenza, E., July-Aug. 2010 390

Moment-curvature diagrams Behavior of Fiber-Reinforced Concrete Columns under Axially and Eccentrically Compressive Loads (107-S26) Campione, G.; Fossetti, M.; and Papia, M., May-June 2010 272

Monolithic Analytical Modeling of Medium-Rise Reinforced Concrete Shear Walls (107-S39) Jiang, H., and Kurama, Y. C., July-Aug. 2010 400

Monotonic

—Pushover Analysis of Shear-Critical Frames: Formulation (107-S07) Guner, S., and Vecchio, F. J., Jan.-Feb. 2010 63

—Pushover Analysis of Shear-Critical Frames: Verification and Application (107-S08) Guner, S., and Vecchio, F. J., Jan.-Feb. 2010 72

Montejo, L. A. Seismic Design of Reinforced Concrete Bridge Columns at Subfreezing Temperatures (107-S42) July-Aug. 2010 427

Muttoni, A.

—Influence of Shear on Rotation Capacity of Reinforced Concrete Members Without Shear Reinforcement (107-S50) Sept.-Oct. 2010 516

—Interaction between Bond and Deviation Forces in Spalling Failures of Arch-Shaped Members without Transverse Reinforcement (107-S34) May-June 2010 346

—Reinforced Concrete Slab Shear Prediction Competition: Entries and Discussion (Disc. 106-S30) Mar.-Apr. 2010 250

—Strengthening of Flat Slabs Against Punching Shear Using Post-Installed Shear Reinforcement (107-S43) July-Aug. 2010 434

N

Nanni, A. Behavior of Full-Scale Glass Fiber-Reinforced Polymer Reinforced Concrete Columns under Axial Load (107-S58) Sept.-Oct. 2010 589

Nawy, E. G. New Formula to Calculate Crack Spacing for Concrete Plates, A (Disc. 107-S05) Nov.-Dec. 2010. 735

Nazief, M. A. Boundary Element Method Calculation of Moment Transfer Parameters in Slab-Column Connections (107-S16) Mar.-Apr. 2010 164

Near-fault ground motion Experimental Study of Reinforced Concrete Bridge Columns Subjected to Near-Fault Ground Motions (107-S01) Choi, H.; Saiid Saiidi, M.; Somerville, P.; and El-Azazy, S., Jan.-Feb. 2010 .. 3

New Formula to Calculate Crack Spacing for Concrete Plates, A (107-S05)

—Rizk, E., and Marzouk, H., Jan.-Feb. 2010 43

—Disc. by Nawy, E. G., Nov.-Dec. 2010 735

—Disc. by Windisch, A., Nov.-Dec. 2010 735

New Formula to Calculate Minimum Flexure Reinforcement for Thick High-Strength Concrete Plates (106-S61)

—Rizk, E., and Marzouk, H., Sept.-Oct. 2009 656

—Disc. by Cevik, A., July-Aug. 2010 490

Ng, S. T. K. Shear Behavior of Externally Prestressed Beams with Carbon Fiber-Reinforced Polymer Tendons (107-S44) July-Aug. 2010 443

Nodal regions Confinement of Deep Beam Nodal Regions (107-S70) Tuchscherer, R.; Birrcher, D.; Huizinga, M.; and Bayrak, O., Nov.-Dec. 2010 709

Nonlinear Nonlinear Analysis of Cross Sections under Axial Load and Biaxial Bending (107-S38) Di Ludovico, M.; Lignola, G. P.; Prota, A.; and Cosenza, E., July-Aug. 2010. 390

Nonlinear analysis

—Gravity Load Redistribution and Progressive Collapse Resistance of 20-Story Reinforced Concrete Structure following Loss of Interior Column (107-S62) Sasani, M., and Sagiroglu, S., Nov.-Dec. 2010 636

—Pushover Analysis of Shear-Critical Frames: Formulation (107-S07) Guner, S., and Vecchio, F. J., Jan.-Feb. 2010 63

—Pushover Analysis of Shear-Critical Frames: Verification and Application (107-S08) Guner, S., and Vecchio, F. J., Jan.-Feb. 2010 72

Nonlinear Analysis of Cross Sections under Axial Load and Biaxial Bending (107-S38) Di Ludovico, M.; Lignola, G. P.; Prota, A.; and Cosenza, E., July-Aug. 2010. 390

Nonlinear Stability Analysis of Concrete-Filled Fiber-Reinforced Polymer-Tube Columns: Experimental and Theoretical Investigation (107-69) Mohamed, H. M.; Abdel-Baky, H. M.; and Masmoudi, R., Nov.-Dec. 2010 699

Normal-strength concrete Crack Width Estimation for Concrete Plates (107-S27) Marzouk, H.; Hossin, M.; and Hussein, A., May-June 2010 ... 282

O

Offshore concrete walls Crack Width Estimation for Concrete Plates (107-S27) Marzouk, H.; Hossin, M.; and Hussein, A., May-June 2010 282

Oh, B.

—Compression Lap Splice in Unconfined Concrete of 40 and 60 MPa (5800 and 8700 psi) Compressive Strengths (107-S17) Mar.-Apr. 2010 170

—Compression Splices in Confined Concrete of 40 and 60 MPa (5800 and 8700 psi) Compressive Strengths (107-S48) July-Aug. 2010 476

Oh, B.-H. Shear Behavior of Large-Scale Post-Tensioned Girders with Small Shear Span-Depth Ratio (107-S13) Mar.-Apr. 2010 137

Otieno, M. B. Crack Behavior near Reinforcing Bars in Concrete Structures (Disc. 106-S25) Mar.-Apr. 2010 248

Out-of-plane failure Transverse Resistance of Masonry Infills (107-S46) Moghaddam, H., and Goudarzi, N., July-Aug. 2010 461

P

Papia, M. Behavior of Fiber-Reinforced Concrete Columns under Axially and Eccentrically Compressive Loads (107-S26) May-June 2010 . . . 272

Park, H.-G.

—Evaluation of Inelastic Deformation Capacity of Beams Subjected to Cyclic Loading (107-S49) Sept.-Oct. 2010 507

—Secant Stiffness Method for Inelastic Design of Strut-and-Tie Model (107-S68) Nov.-Dec. 2010 689

Park, J. Behavior of Reinforced Concrete Columns Confined by New Steel-Jacketing Method (107-S64) Nov.-Dec. 2010 654

Park, K. R. Shear Behavior of Headed Anchors with Large Diameters and Deep Embedments (107-S14) Mar.-Apr. 2010 146

Parra-Montesinos, G. J.

—Evaluation of Steel Fiber Reinforcement for Punching Shear Resistance in Slab-Column Connections—Part I: Monotonically Increased Load (107-S11) Jan.-Feb. 2010 101

—Evaluation of Steel Fiber Reinforcement for Punching Shear Resistance in Slab-Column Connections—Part II: Lateral Displacement Reversals (107-S12) Jan.-Feb. 2010 110

—Shear Behavior of Steel Fiber-Reinforced Concrete Beams without Stirrup Reinforcement (107-S59) Sept.-Oct. 2010 597

Performance Evaluation of Glass Fiber-Reinforced Polymer Shear Reinforcement for Concrete Beams (107-S06)

—Ahmed, E. A.; El-Salakawy, E. F.; and Benmokrane, B., Jan.-Feb. 2010 53

—Disc. by Windisch, A., Nov.-Dec. 2010 738

Performance of Reinforced Concrete Columns Designed for Flexure under Severe Displacement Cycles (107-S36) Acun, B., and Sucuoglu, H., May-June 2010 364

Performance of Retrofit Highway Barriers with Mechanical Anchors (107-S37) Mitchell, G.; Strahota, M. T.; Gokani, V.; Picón, R.; Yang, S.; Klingner, R. E.; and Williamson, E. B., July-Aug. 2010 381

Performance-based design

—Relationship between Strain, Curvature, and Drift in Reinforced Concrete Moment Frames in Support of Performance-Based Seismic Design (107-S28) Vidot-Vega, A. L., and Kowalsky, M. J., May-June 2010 . . . 291

—Secant Stiffness Method for Inelastic Design of Strut-and-Tie Model (107-S68) Eom, T.-S., and Park, H.-G., Nov.-Dec. 2010 689

Phillippi, D. J. Analytical Model for Fiber-Reinforced Polymer-Jacketed Square Concrete Columns in Axial Compression (107-S21) Mar.-Apr. 2010 208

Physical model Interaction between Bond and Deviation Forces in Spalling Failures of Arch-Shaped Members without Transverse Reinforcement (107-S34) Fernández Ruiz, M.; Plumey, S.; and Muttoni, A., May-June 2010 346

Picón, R. Performance of Retrofit Highway Barriers with Mechanical Anchors (107-S37) July-Aug. 2010 381

Pipes Spiral Post-Tensioning System for Concrete Members (107-S55) Krishnamra, N.; Limsuwan, E.; and Dawe, J., Sept.-Oct. 2010 563

Plain round bar Behavior of Deficient Joints with Plain Bars and Low-Strength Concrete (107-S29) Bedirhanoglu, I.; Ilki, A.; Pujol, S.; and Kumbasar, N., May-June 2010 300

Plastic hinge length Seismic Design Method for Reinforced Concrete Two-Way Column Hinges (107-S56) Cheng, Z.-Y.; Saiid Saiidi, M.; and Sanders, D., Sept.-Oct. 2010 572

Plastic hinges Influence of Shear on Rotation Capacity of Reinforced Concrete Members Without Shear Reinforcement (107-S50) Rodrigues, R. V.; Muttoni, A.; and Fernández Ruiz, M., Sept.-Oct. 2010 516

Plate New Formula to Calculate Crack Spacing for Concrete Plates, A (107-S05) Rizk, E., and Marzouk, H., Jan.-Feb. 2010 43

Plumey, S. Interaction between Bond and Deviation Forces in Spalling Failures of Arch-Shaped Members without Transverse Reinforcement (107-S34) May-June 2010 346

Post-installed Performance of Retrofit Highway Barriers with Mechanical Anchors (107-S37) Mitchell, G.; Strahota, M. T.; Gokani, V.; Picón, R.; Yang, S.; Klingner, R. E.; and Williamson, E. B., July-Aug. 2010 . . . 381

Post-installed reinforcement Strengthening of Flat Slabs Against Punching Shear Using Post-Installed Shear Reinforcement (107-S43) Fernández Ruiz, M.; Muttoni, A.; and Kunz, J., July-Aug. 2010 434

Post-tension Measured Strains in Post-Tensioned Concrete Parking Deck Made with Shrinkage-Compensating Concrete (107-S71) Richardson, J.; Eskildsen, S.; Schiller, B.; and Jones, M., Nov.-Dec. 2010 718

Post-tensioned Shear Behavior of Large-Scale Post-Tensioned Girders with Small Shear Span-Depth Ratio (107-S13) Lee, S.-C.; Cho, J.-Y.; and Oh, B.-H., Mar.-Apr. 2010 137

Post-tensioning

—Shear Behavior of Externally Prestressed Beams with Carbon Fiber-Reinforced Polymer Tendons (107-S44) Ng, S. T. K., and Soudki, K., July-Aug. 2010 443

—Spiral Post-Tensioning System for Concrete Members (107-S55) Krishnamra, N.; Limsuwan, E.; and Dawe, J., Sept.-Oct. 2010 563

Prestress transfer Effects of Increasing Allowable Compressive Stress at Prestress Transfer (107-S03) Birrcher, D. B.; Bayrak, O.; and Kreger, M. E., Jan.-Feb. 2010 21

Prestressed concrete

—Shear Strengths of Prestressed Concrete Beams Part 1: Experiments and Shear Design Equations (107-S32) Laskar, A.; Hsu, T. T. C.; and Mo, Y. L., May-June 2010 330

—Shear Strengths of Prestressed Concrete Beams Part 2: Comparisons with ACI and AASHTO Provisions (107-S33) Hsu, T. T. C.; Laskar, A.; and Mo, Y. L., May-June 2010 340

Prestressed concrete girder Shear Behavior of Large-Scale Post-Tensioned Girders with Small Shear Span-Depth Ratio (107-S13) Lee, S.-C.; Cho, J.-Y.; and Oh, B.-H., Mar.-Apr. 2010 137

Progressive collapse Gravity Load Redistribution and Progressive Collapse Resistance of 20-Story Reinforced Concrete Structure following Loss of Interior Column (107-S62) Sasani, M., and Sagiroglu, S., Nov.-Dec. 2010 636

Progressive Collapse Resistance to Axially-Restrained Frame Beams (106-S55)

—Su, Y.; Tian, Y.; and Song, X., Sept.-Oct. 2009 600

—Disc. by Yi, W.; He, Q.; and Yang, X., July-Aug. 2010 486

Prota, A. Nonlinear Analysis of Cross Sections under Axial Load and Biaxial Bending (107-S38) July-Aug. 2010 390

Pujol, S.

—Behavior of Deficient Joints with Plain Bars and Low-Strength Concrete (107-S29) May-June 2010 300

—Reinforced Concrete Slab Shear Prediction Competition: Entries and Discussion (Disc. 106-S30) Mar.-Apr. 2010 249

Pullout Bar Pullout Tests and Seismic Tests of Small-Headed Bars in Beam-Column Joints (107-S04) Kang, T. H.-K.; Ha, S.-S.; and Choi, D.-U., Jan.-Feb. 2010 32

Punching shear

—Boundary Element Method Calculation of Moment Transfer Parameters in Slab-Column Connections (107-S16) Nazief, M. A.; Rashed, Y. F.; and El-Degwy, W. M., Mar.-Apr. 2010 164

—Evaluation of Steel Fiber Reinforcement for Punching Shear Resistance in Slab-Column Connections—Part II: Lateral Displacement Reversals (107-S12) Cheng, M.-Y., and Parra-Montesinos, G. J., Jan.-Feb. 2010 110

—Evaluation of Steel Fiber Reinforcement for Punching Shear Resistance in Slab-Column Connections—Part I: Monotonically Increased Load (107-S11) Cheng, M.-Y., and Parra-Montesinos, G. J., Jan.-Feb. 2010 101

—Grid Model for Flat-Slab Structures (107-S63) Coronelli, D., Nov.-Dec. 2010 645

—Punching Shear Behavior of Two-Way Slabs Reinforced with High-Strength Steel (107-S47) Yang, J.-M.; Yoon, Y.-S.; Cook, W. D.; and Mitchell, D., July-Aug. 2010 468

Punching Shear Behavior of Two-Way Slabs Reinforced with High-Strength Steel (107-S47) Yang, J.-M.; Yoon, Y.-S.; Cook, W. D.; and Mitchell, D., July-Aug. 2010 468

Punching shear strength Strengthening of Flat Slabs Against Punching Shear Using Post-Installed Shear Reinforcement (107-S43) Fernández Ruiz, M.; Muttoni, A.; and Kunz, J., July-Aug. 2010 434
Punching Strength of Reinforced Concrete Footings (106-S66)
—Hegger, J.; Ricker, M.; and Sherif, A. G., Sept.-Oct. 2009 706
—Disc. by Windisch, A., July-Aug. 2010 494
Pushover
—Pushover Analysis of Shear-Critical Frames: Formulation (107-S07) Guner, S., and Vecchio, F. J., Jan.-Feb. 2010 63
—Pushover Analysis of Shear-Critical Frames: Verification and Application (107-S08) Guner, S., and Vecchio, F. J., Jan.-Feb. 2010 72
Pushover Analysis of Shear-Critical Frames: Formulation (107-S07)
—Guner, S., and Vecchio, F. J., Jan.-Feb. 2010 63
—Disc. by Windisch, A., Nov.-Dec. 2010 740
Pushover Analysis of Shear-Criti cal Frames: Verification and Application (107-S08)
—Guner, S., and Vecchio, F. J., Jan.-Feb. 2010 72
—Disc. by Chen, S., and Liu, J., Nov.-Dec. 2010 744
—Disc. by Windisch, A., Nov.-Dec. 2010 743

R

Rahal, K. N. Shear-Transfer Strength of Reinforced Concrete (107-S41) July-Aug. 2010 419
Ramirez, J. A. Influence of Effective Depth on Shear Strength of Concrete Beams—Experimental Study (107-S54) Sept.-Oct. 2010 554
Rashed, Y. F. Boundary Element Method Calculation of Moment Transfer Parameters in Slab-Column Connections (107-S16) Mar.-Apr. 2010 164
Reactive powder concrete Carbon Fiber-Reinforced Polymer Confined Reactive Powder Concrete Columns—Experimental Investigation (107-S25) Malik, A. R., and Foster, S. J., May-June 2010 263
Reda Taha, M. M. Creep Effects in Plain and Fiber-Reinforced Polymer-Strengthened Reinforced Concrete Beams (107-S61) Nov.-Dec. 2010... 627
Reinforced brick masonry Experiments on Reinforced Brick Masonry Vaulted Light Roofs (107-S35) López-Almansa, F.; Roca, P.; Sarrablo, V.; Cahís, X.; and Canet, J. M., May-June 2010 355
Reinforced concrete
—Behavior of Deficient Joints with Plain Bars and Low-Strength Concrete (107-S29) Bedirhanoglu, I.; Ilki, A.; Pujol, S.; and Kumbasar, N., May-June 2010 300
—Behavior of Full-Scale Glass Fiber-Reinforced Polymer Reinforced Concrete Columns under Axial Load (107-S58) De Luca, A., Matta, F.; and Nanni, A., Sept.-Oct. 2010 589
—Comparison of One- and Two-Way Slab Minimum Thickness Provisions in Building Codes and Standards (107-S15) Lee, Y. H., and Scanlon, A., Mar.-Apr. 2010 157
—Crack Width Estimation for Concrete Plates (107-S27) Marzouk, H.; Hossin, M.; and Hussein, A., May-June 2010 282
—Creep Effects in Plain and Fiber-Reinforced Polymer-Strengthened Reinforced Concrete Beams (107-S61) Reda Taha, M. M.; Masia, M. J.; Choi, K.-K.; Shrive, P. L.; and Shrive, N. G., Nov.-Dec. 2010 627
—Evaluation of Inelastic Deformation Capacity of Beams Subjected to Cyclic Loading (107-S49) Choi, K.-K., and Park, H.-G., Sept.-Oct. 2010 507
—Evaluation of Reinforced Concrete Deck Girder Bridge Bent Caps with 1950s Vintage Details: Laboratory Tests (107-S52) Senturk, A. E., and Higgins, C., Sept.-Oct. 2010 534
—Experimental Study of Reinforced Concrete Bridge Columns Subjected to Near-Fault Ground Motions (107-S01) Choi, H.; Saiid Saiidi, M.; Somerville, P.; and El-Azazy, S., Jan.-Feb. 2010 3
—Fatigue Evaluation for Reinforced Concrete Box Culverts (107-S02) Maximos, H.; Erdogmus, E.; and Tadros, M. K., Jan.-Feb. 2010 13
—FEA Implementation of Smeared Cyclic Bond Slip-Based Two-Dimensional Membrane Model (107-S10) So, M.; Harmon, T. G.; and Dyke, S., Jan.-Feb. 2010 92
—Flexural Cracks in Fiber-Reinforced Concrete Beams with Fiber-Reinforced Polymer Reinforcing Bars (107-S31) Lee, W. K.; Jansen, D. C.; Berlin, K. B.; and Cohen, I. E., May-June 2010 321
—Pushover Analysis of Shear-Critical Frames: Formulation (107-S07) Guner, S., and Vecchio, F. J., Jan.-Feb. 2010 63
—Pushover Analysis of Shear-Critical Frames: Verification and Application (107-S08) Guner, S., and Vecchio, F. J., Jan.-Feb. 2010 72
—Secant Stiffness Method for Inelastic Design of Strut-and-Tie Model (107-S68) Eom, T.-S., and Park, H.-G., Nov.-Dec. 2010 689
—Seismic Design Method for Reinforced Concrete Two-Way Column Hinges (107-S56) Cheng, Z.-Y.; Saiid Saiidi, M.; and Sanders, D., Sept.-Oct. 2010 572
—Shear-Transfer Strength of Reinforced Concrete (107-S41) Rahal, K. N., July-Aug. 2010 419
—Simple Rational Formulas for Cracking Torque and Twist of Reinforced Concrete Members (107-S19) Jeng, C.-H., Mar.-Apr. 2010 189
—Smeared Rotating Crack Model for Reinforced Concrete Membrane Elements (107-S40) Broujerdian, V., and Kazemi, M. T., July-Aug. 2010 411
—Stiffness of Reinforced Concrete Frame Members for Seismic Analysis (107-S60) Kumar, R., and Singh, Y., Sept.-Oct. 2010 607
Reinforced concrete beams
—Influence of Effective Depth on Shear Strength of Concrete Beams—Experimental Study (107-S54) Sneed, L. H., and Ramirez, J. A., Sept.-Oct. 2010 554
—Maximum Shear Reinforcement of Reinforced Concrete Beams (107-S57) Lee, J.-Y., and Hwang, H.-B., Sept.-Oct. 2010 580
Reinforced concrete columns Behavior of Reinforced Concrete Columns Confined by New Steel-Jacketing Method (107-S64) Choi, E.; Chung, Y.-S.; Park, J.; and Cho, B.-S., Nov.-Dec. 2010 654
Reinforced concrete frames Relationship between Strain, Curvature, and Drift in Reinforced Concrete Moment Frames in Support of Performance-Based Seismic Design (107-S28) Vidot-Vega, A. L., and Kowalsky, M. J., May-June 2010 291
Reinforced Concrete Slab Shear Pr ediction Competition: Entries and Discussion (106-S30)
—Jaeger, T., and Marti, P., May-June 2009 309
—Disc. by Muttoni, A., and Fernández Ruiz, M., Mar.-Apr. 2010 250
—Disc. by Pujol, S., Mar.-Apr. 2010 249
Reinforced concrete structure Reliability Safety Assessment of Corroding Reinforced Concrete Structures Based on Visual Inspection Information (107-S66) Stewart, M. G., Nov.-Dec. 2010 671
Reinforcement Evaluation of Steel Fiber Reinforcement for Punching Shear Resistance in Slab-Column Connections—Part II: Lateral Displacement Reversals (107-S12) Cheng, M.-Y., and Parra-Montesinos, G. J., Jan.-Feb. 2010 110
Reinforcement st eel Experimental and Analytical Evaluation of Reinforced Concrete Girders under Low-Cycle Shear Fatigue (107-S20) Forrest, R. W. B.; Higgins, C.; and Senturk, A. E., Mar.-Apr. 2010 .. 199
Relationship between Strain, Curvature, and Drift in Reinforced Concrete Moment Frames in Supp ort of Performance-Based Seismi c Design (107-S28) Vidot-Vega, A. L., and Kowalsky, M. J., May-June 2010 291
Reliability Reliability Safety Assessment of Corroding Reinforced Concrete Structures Based on Visual Inspection Information (107-S66) Stewart, M. G., Nov.-Dec. 2010 671
Reliability Safety Assessment of Corroding Reinforced Concrete Structures Based on Visual Inspection Information (107-S66) Stewart, M. G., Nov.-Dec. 2010 671
Repair Seismic Rehabilitation of Slab-Column Connections (107-S24) Widianto; Bayrak, O.; Jirsa, J. O.; and Tian, Y., Mar.-Apr. 2010 237
Residual displacement Experimental Study of Reinforced Concrete Bridge Columns Subjected to Near-Fault Ground Motions (107-S01) Choi, H.; Saiid Saiidi, M.; Somerville, P.; and El-Azazy, S., Jan.-Feb. 2010 3
Retrofit
—Performance of Retrofit Highway Barriers with Mechanical Anchors (107-S37) Mitchell, G.; Strahota, M. T.; Gokani, V.; Picón, R.; Yang, S.; Klingner, R. E.; and Williamson, E. B., July-Aug. 2010 381
—Pushover Analysis of Shear-Critical Frames: Formulation (107-S07) Guner, S., and Vecchio, F. J., Jan.-Feb. 2010 63
Richardson, J. Measured Strains in Post-Tensioned Concrete Parking Deck Made with Shrinkage-Compensating Concrete (107-S71) Nov.-Dec. 2010 718
Rizk, E. New Formula to Calculate Crack Spacing for Concrete Plates, A (107-S05) Jan.-Feb. 2010 43
Robinson, D. Investigation of Ultimate Strength of Deck Slabs in Steel-Concrete Bridges (107-S09) Jan.-Feb. 2010 82
Roca, P. Experiments on Reinforced Brick Masonry Vaulted Light Roofs (107-S35) May-June 2010 355
Rodrigues, R. V. Influence of Shear on Rotation Capacity of Reinforced Concrete Members Without Shear Reinforcement (107-S50) Sept.-Oct. 2010 516

Rods Shear Behavior of Externally Prestressed Beams with Carbon Fiber-Reinforced Polymer Tendons (107-S44) Ng, S. T. K., and Soudki, K., July-Aug. 2010 443
Rotation capacity Evaluation of Inelastic Deformation Capacity of Beams Subjected to Cyclic Loading (107-S49) Choi, K.-K., and Park, H.-G., Sept.-Oct. 2010 507

S

Saeed, H. Modeling of Reinforced Concrete Slabs Strengthened with Fiber-Reinforced Polymer or Steel Plates (107-S22) Mar.-Apr. 2010 218
Safety Reliability Safety Assessment of Corroding Reinforced Concrete Structures Based on Visual Inspection Information (107-S66) Stewart, M. G., Nov.-Dec. 2010 671
Sagiroglu, S. Gravity Load Redistribution and Progressive Collapse Resistance of 20-Story Reinforced Concrete Structure following Loss of Interior Column (107-S62) Nov.-Dec. 2010 636
Sahoo, D. K. Evaluation of Load Transfer and Strut Strength of Deep Beams with Short Longitudinal Bar Anchorages (Disc. 106-S63) July-Aug. 2010 491
Saiid Saiidi, M.
—Experimental Study of Reinforced Concrete Bridge Columns Subjected to Near-Fault Ground Motions (107-S01) Jan.-Feb. 2010 3
—Seismic Design Method for Reinforced Concrete Two-Way Column Hinges (107-S56) Sept.-Oct. 2010 572
Sanders, D. Seismic Design Method for Reinforced Concrete Two-Way Column Hinges (107-S56) Sept.-Oct. 2010 572
Sarrablo, V. Experiments on Reinforced Brick Masonry Vaulted Light Roofs (107-S35) May-June 2010 355
Sasani, M. Gravity Load Redistribution and Progressive Collapse Resistance of 20-Story Reinforced Concrete Structure following Loss of Interior Column (107-S62) Nov.-Dec. 2010 636
Scanlon, A. Comparison of One- and Two-Way Slab Minimum Thickness Provisions in Building Codes and Standards (107-S15) Mar.-Apr. 2010 157
Schiller, B. Measured Strains in Post-Tensioned Concrete Parking Deck Made with Shrinkage-Compensating Concrete (107-S71) Nov.-Dec. 2010 718
Secant stiffness Secant Stiffness Method for Inelastic Design of Strut-and-Tie Model (107-S68) Eom, T.-S., and Park, H.-G., Nov.-Dec. 2010 689
Secant Stiffness Method for Inelas tic Design of Strut-and-Tie Model (107-S68) Eom, T.-S., and Park, H.-G., Nov.-Dec. 2010 689
Sectional Pushover Analysis of Shear-Critical Frames: Verification and Application (107-S08) Guner, S., and Vecchio, F. J., Jan.-Feb. 2010 72
Seismic
—Analytical Modeling of Medium-Rise Reinforced Concrete Shear Walls (107-S39) Jiang, H., and Kurama, Y. C., July-Aug. 2010 400
—Bar Pullout Tests and Seismic Tests of Small-Headed Bars in Beam-Column Joints (107-S04) Kang, T. H.-K.; Ha, S.-S.; and Choi, D.-U., Jan.-Feb. 2010 32
—Seismic Design of Reinforced Concrete Bridge Columns at Subfreezing Temperatures (107-S42) Montejo, L. A.; Marx, E.; and Kowalsky, M. J., July-Aug. 2010 427
—Seismic Shear Behavior of Lightweight Aggregate Concrete Square Columns (107-S67) Hendrix, S. E., and Kowalsky, M. J., Nov.-Dec. 2010 680
Seismic Behavior of 150 MPa (22 ksi) Concrete Flexural Elements (107-S30) Elmenshawi, A., and Brown, T., May-June 2010 311
Seismic Design Method for Rein forced Concrete Two-Way Column Hinges (107-S56) Cheng, Z.-Y.; Saiid Saiidi, M.; and Sanders, D., Sept.-Oct. 2010 572
Seismic Design of Reinforced Concrete Bridge Columns at Subfreezing Temperatures (107-S42) Montejo, L. A.; Marx, E.; and Kowalsky, M. J., July-Aug. 2010 427
Seismic loads Seismic Design Method for Reinforced Concrete Two-Way Column Hinges (107-S56) Cheng, Z.-Y.; Saiid Saiidi, M.; and Sanders, D., Sept.-Oct. 2010 572
Seismic rehabilitation Seismic Rehabilitation of Slab-Column Connections (107-S24) Widianto; Bayrak, O.; Jirsa, J. O.; and Tian, Y., Mar.-Apr. 2010 237
Seismic Rehabilitation of Slab-Column Connections (107-S24) Widianto; Bayrak, O.; Jirsa, J. O.; and Tian, Y., Mar.-Apr. 2010 237
Seismic retrofit Behavior of Reinforced Concrete Columns Confined by New Steel-Jacketing Method (107-S64) Choi, E.; Chung, Y.-S.; Park, J.; and Cho, B.-S., Nov.-Dec. 2010 654
Seismic Shear Behavior of Lightw eight Aggregate Concrete Square Columns (107-S67) Hendrix, S. E., and Kowalsky, M. J., Nov.-Dec. 2010 680
Senturk, A. E.
—Evaluation of Reinforced Concrete Deck Girder Bridge Bent Caps with 1950s Vintage Details: Laboratory Tests (107-S52) Sept.-Oct. 2010 534
—Evaluation of Reinforced Concrete Deck Girder Bridge Bent Caps with 1950s Vintage Details: Analytical Methods (107-S53) Sept.-Oct. 2010 544
—Experimental and Analytical Evaluation of Reinforced Concrete Girders under Low-Cycle Shear Fatigue (107-S20) Mar.-Apr. 2010 199
Serviceability Comparison of One- and Two-Way Slab Minimum Thickness Provisions in Building Codes and Standards (107-S15) Lee, Y. H., and Scanlon, A., Mar.-Apr. 2010 157
Service-life prediction Reliability Safety Assessment of Corroding Reinforced Concrete Structures Based on Visual Inspection Information (107-S66) Stewart, M. G., Nov.-Dec. 2010 671
Shear
—Behavior of Deficient Joints with Plain Bars and Low-Strength Concrete (107-S29) Bedirhanoglu, I.; Ilki, A.; Pujol, S.; and Kumbasar, N., May-June 2010 300
—Behavior of Large Deep Beams Subjected to Monotonic and Reversed Cyclic Shear (107-S72) Mihaylov, B. I.; Bentz, E. C.; and Collins, M. P., Nov.-Dec. 2010 726
—Evaluation of Reinforced Concrete Deck Girder Bridge Bent Caps with 1950s Vintage Details: Analytical Methods (107-S53) Senturk, A. E., and Higgins, C., Sept.-Oct. 2010 544
—Evaluation of Reinforced Concrete Deck Girder Bridge Bent Caps with 1950s Vintage Details: Laboratory Tests (107-S52) Senturk, A. E., and Higgins, C., Sept.-Oct. 2010 534
—Experimental and Analytical Evaluation of Reinforced Concrete Girders under Low-Cycle Shear Fatigue (107-S20) Forrest, R. W. B.; Higgins, C.; and Senturk, A. E., Mar.-Apr. 2010 199
—Performance Evaluation of Glass Fiber-Reinforced Polymer Shear Reinforcement for Concrete Beams (107-S06) Ahmed, E. A.; El-Salakawy, E. F.; and Benmokrane, B., Jan.-Feb. 2010 53
—Pushover Analysis of Shear-Critical Frames: Formulation (107-S07) Guner, S., and Vecchio, F. J., Jan.-Feb. 2010 63
—Pushover Analysis of Shear-Critical Frames: Verification and Application (107-S08) Guner, S., and Vecchio, F. J., Jan.-Feb. 2010 72
—Shear Behavior of Concrete Slabs Longitudinally Reinforced with High-Performance Steel (107-S23) Desalegne, A. S., and Lubell, A. S., Mar.-Apr. 2010 228
—Shear Behavior of Externally Prestressed Beams with Carbon Fiber-Reinforced Polymer Tendons (107-S44) Ng, S. T. K., and Soudki, K., July-Aug. 2010 443
Shear Behavior of Concrete Sl abs Longitudinally R einforced wi th High-Performance Steel (107-S23) Desalegne, A. S., and Lubell, A. S., Mar.-Apr. 2010 228
Shear Behavior of Externally Pres tressed Beams with Carbon Fiber-Reinforced Polymer Tendons (107-S44) Ng, S. T. K., and Soudki, K., July-Aug. 2010 443
Shear Behavior of Headed Anchor s with Large Diameters and Deep Embedments (107-S14) Lee, N. H.; Park, K. R.; and Suh, Y. P., Mar.-Apr. 2010 146
Shear Behavior of Large-Scale Po st-Tensioned Girders with Small Shear Span-Depth Ratio (107-S13) Lee, S.-C.; Cho, J.-Y.; and Oh, B.-H., Mar.-Apr. 2010 137
Shear Behavior of Steel Fiber-Re inforced Concrete Beams without Stirrup Reinforcement (107-S59) Dinh, H. H.; Parra-Montesinos, G. J.; and Wight, J. K., Sept.-Oct. 2010 597
Shear capacity Seismic Design Method for Reinforced Concrete Two-Way Column Hinges (107-S56) Cheng, Z.-Y.; Saiid Saiidi, M.; and Sanders, D., Sept.-Oct. 2010 572
Shear deformation
—Shear Behavior of Large-Scale Post-Tensioned Girders with Small Shear Span-Depth Ratio (107-S13) Lee, S.-C.; Cho, J.-Y.; and Oh, B.-H., Mar.-Apr. 2010 137
—Stiffness of Reinforced Concrete Frame Members for Seismic Analysis (107-S60) Kumar, R., and Singh, Y., Sept.-Oct. 2010 607
Shear design
—Shear Strengths of Prestressed Concrete Beams Part 1: Experiments and Shear Design Equations (107-S32) Laskar, A.; Hsu, T. T. C.; and Mo, Y. L., May-June 2010 330

—Shear Strengths of Prestressed Concrete Beams Part 2: Comparisons with ACI and AASHTO Provisions (107-S33) Hsu, T. T. C.; Laskar, A.; and Mo, Y. L., May-June 2010 340
Shear reinforcement
—Grid Model for Flat-Slab Structures (107-S63) Coronelli, D., Nov.-Dec. 2010 645
—Seismic Rehabilitation of Slab-Column Connections (107-S24) Widianto; Bayrak, O.; Jirsa, J. O.; and Tian, Y., Mar.-Apr. 2010 237
Shear strength
—Evaluation of Inelastic Deformation Capacity of Beams Subjected to Cyclic Loading (107-S49) Choi, K.-K., and Park, H.-G., Sept.-Oct. 2010 507
—Influence of Shear on Rotation Capacity of Reinforced Concrete Members Without Shear Reinforcement (107-S50) Rodrigues, R. V.; Muttoni, A.; and Fernández Ruiz, M., Sept.-Oct. 2010 516
—Interaction between Bond and Deviation Forces in Spalling Failures of Arch-Shaped Members without Transverse Reinforcement (107-S34) Fernández Ruiz, M.; Plumey, S.; and Muttoni, A., May-June 2010 346
—Shear Behavior of Steel Fiber-Reinforced Concrete Beams without Stirrup Reinforcement (107-S59) Dinh, H. H.; Parra-Montesinos, G. J.; and Wight, J. K., Sept.-Oct. 2010 597
—Shear Strengths of Prestressed Concrete Beams Part 1: Experiments and Shear Design Equations (107-S32) Laskar, A.; Hsu, T. T. C.; and Mo, Y. L., May-June 2010 330
—Shear Strengths of Prestressed Concrete Beams Part 2: Comparisons with ACI and AASHTO Provisions (107-S33) Hsu, T. T. C.; Laskar, A.; and Mo, Y. L., May-June 2010 340
—Tests on Lightweight Concrete Deep Beams (107-S65) Yang, K.-H., Nov.-Dec. 2010 663
Shear Strength of Reinforced Concrete Slender Beams with or without Axial Forces—A Generalized Theory (106-S72)
—Zararis, P. D., and Zararis, I. P., Nov.-Dec. 2009 782
—Disc. by Madsen, M. B.; Hansen, S.; Hoang, L. C., Sept.-Oct. 2010 616
—Disc. by Windisch, A., Sept.-Oct. 2010 616
Shear strength tests Influence of Effective Depth on Shear Strength of Concrete Beams—Experimental Study (107-S54) Sneed, L. H., and Ramirez, J. A., Sept.-Oct. 2010 554
Shear Strengths of Prestressed Concrete Beams Part 1: Experiments and Shear Design Equations (107-S32) Laskar, A.; Hsu, T. T. C.; and Mo, Y. L., May-June 2010 330
Shear Strengths of Prestressed Concrete Beams Part 2: Comparisons with ACI and AASHTO Provisions (107-S33) Hsu, T. T. C.; Laskar, A.; and Mo, Y. L., May-June 2010 340
Shear tests Shear Behavior of Headed Anchors with Large Diameters and Deep Embedments (107-S14) Lee, N. H.; Park, K. R.; and Suh, Y. P., Mar.-Apr. 2010 146
Shear wall
—Analytical Modeling of Medium-Rise Reinforced Concrete Shear Walls (107-S39) Jiang, H., and Kurama, Y. C., July-Aug. 2010 400
—FEA Implementation of Smeared Cyclic Bond Slip-Based Two-Dimensional Membrane Model (107-S10) So, M.; Harmon, T. G.; and Dyke, S., Jan.-Feb. 2010 92
Shear-friction Shear-Transfer Strength of Reinforced Concrete (107-S41) Rahal, K. N., July-Aug. 2010 419
Shear-transfer Shear-Transfer Strength of Reinforced Concrete (107-S41) Rahal, K. N., July-Aug. 2010 419
Shear-transfer mechanisms Influence of Effective Depth on Shear Strength of Concrete Beams—Experimental Study (107-S54) Sneed, L. H., and Ramirez, J. A., Sept.-Oct. 2010 554
Shear-Transfer Strength of Reinforced Concrete (107-S41) Rahal, K. N., July-Aug. 2010 419
Shi, C.-J. Fatigue Behavior of Reinforced Concrete Beams with Corroded Steel Reinforcement (107-S51) Sept.-Oct. 2010 526
Shrinkage-compensating concrete Measured Strains in Post-Tensioned Concrete Parking Deck Made with Shrinkage-Compensating Concrete (107-S71) Richardson, J.; Eskildsen, S.; Schiller, B.; and Jones, M., Nov.-Dec. 2010 718
Shrive, N. G. Creep Effects in Plain and Fiber-Reinforced Polymer-Strengthened Reinforced Concrete Beams (107-S61) Nov.-Dec. 2010 627
Shrive, P. L. Creep Effects in Plain and Fiber-Reinforced Polymer-Strengthened Reinforced Concrete Beams (107-S61) Nov.-Dec. 2010 627
Simple Rational Formulas for Cracking Torque and Twist of Reinforced Concrete Members (107-S19) Jeng, C.-H., Mar.-Apr. 2010 189
Simulation Pushover Analysis of Shear-Critical Frames: Verification and Application (107-S08) Guner, S., and Vecchio, F. J., Jan.-Feb. 2010 72
Singh, B. Evaluation of Load Transfer and Strut Strength of Deep Beams with Short Longitudinal Bar Anchorages (Disc. 106-S63) July-Aug. 2010 491
Singh, Y. Stiffness of Reinforced Concrete Frame Members for Seismic Analysis (107-S60) Sept.-Oct. 2010 607
Size effect
—Shear Behavior of Concrete Slabs Longitudinally Reinforced with High-Performance Steel (107-S23) Desalegne, A. S., and Lubell, A. S., Mar.-Apr. 2010 228
—Tests on Lightweight Concrete Deep Beams (107-S65) Yang, K.-H., Nov.-Dec. 2010 663
Slab-column connection(s)
—Boundary Element Method Calculation of Moment Transfer Parameters in Slab-Column Connections (107-S16) Nazief, M. A.; Rashed, Y. F.; and El-Degwy, W. M., Mar.-Apr. 2010 164
—Grid Model for Flat-Slab Structures (107-S63) Coronelli, D., Nov.-Dec. 2010 645
—Seismic Rehabilitation of Slab-Column Connections (107-S24) Widianto; Bayrak, O.; Jirsa, J. O.; and Tian, Y., Mar.-Apr. 2010 237
Slabs Punching Shear Behavior of Two-Way Slabs Reinforced with High-Strength Steel (107-S47) Yang, J.-M.; Yoon, Y.-S.; Cook, W. D.; and Mitchell, D., July-Aug. 2010 468
Slenderness ratio Nonlinear Stability Analysis of Concrete-Filled Fiber-Reinforced Polymer-Tube Columns: Experimental and Theoretical Investigation (107-69) Mohamed, H. M.; Abdel-Baky, H. M.; and Masmoudi, R., Nov.-Dec. 2010 699
Slip
—Behavior of Deficient Joints with Plain Bars and Low-Strength Concrete (107-S29) Bedirhanoglu, I.; Ilki, A.; Pujol, S.; and Kumbasar, N., May-June 2010 300
—Seismic Design Method for Reinforced Concrete Two-Way Column Hinges (107-S56) Cheng, Z.-Y.; Saiid Saiidi, M.; and Sanders, D., Sept.-Oct. 2010 572
Smeared Rotating Crack Model for Reinforced Concrete Membrane Elements (107-S40) Broujerdian, V., and Kazemi, M. T., July-Aug. 2010 411
Sneed, L. H. Influence of Effective Depth on Shear Strength of Concrete Beams—Experimental Study (107-S54) Sept.-Oct. 2010 554
So, M. FEA Implementation of Smeared Cyclic Bond Slip-Based Two-Dimensional Membrane Model (107-S10) Jan.-Feb. 2010 92
Somerville, P. Experimental Study of Reinforced Concrete Bridge Columns Subjected to Near-Fault Ground Motions (107-S01) Jan.-Feb. 2010 3
Soudki, K. Shear Behavior of Externally Prestressed Beams with Carbon Fiber-Reinforced Polymer Tendons (107-S44) July-Aug. 2010 443
Spiral Post-Tensioning System for Concrete Members (107-S55) Krishnamra, N.; Limsuwan, E.; and Dawe, J., Sept.-Oct. 2010 563
Spiral strands Spiral Post-Tensioning System for Concrete Members (107-S55) Krishnamra, N.; Limsuwan, E.; and Dawe, J., Sept.-Oct. 2010 563
Splice strength
—Compression Lap Splice in Unconfined Concrete of 40 and 60 MPa (5800 and 8700 psi) Compressive Strengths (107-S17) Chun, S.-C.; Lee, S.-H.; and Oh, B., Mar.-Apr. 2010 170
—Compression Splices in Confined Concrete of 40 and 60 MPa (5800 and 8700 psi) Compressive Strengths (107-S48) Chun, S.-C.; Lee, S.-H.; and Oh, B., July-Aug. 2010 476
Square column Analytical Model for Fiber-Reinforced Polymer-Jacketed Square Concrete Columns in Axial Compression (107-S21) Lee, C.-S.; Hegemier, G. A.; and Phillippi, D. J., Mar.-Apr. 2010 208
Steel Evaluation of Steel Fiber Reinforcement for Punching Shear Resistance in Slab-Column Connections—Part I: Monotonically Increased Load (107-S11) Cheng, M.-Y., and Parra-Montesinos, G. J., Jan.-Feb. 2010 101
Steel bolts Modeling of Reinforced Concrete Slabs Strengthened with Fiber-Reinforced Polymer or Steel Plates (107-S22) Ebead, U., and Saeed, H., Mar.-Apr. 2010 218
Steel collars Seismic Rehabilitation of Slab-Column Connections (107-S24) Widianto; Bayrak, O.; Jirsa, J. O.; and Tian, Y., Mar.-Apr. 2010 237
Steel fibers
—Behavior of Fiber-Reinforced Concrete Columns under Axially and Eccentrically Compressive Loads (107-S26) Campione, G.; Fossetti, M.; and Papia, M., May-June 2010 272

—Evaluation of Steel Fiber Reinforcement for Punching Shear Resistance in Slab-Column Connections—Part II: Lateral Displacement Reversals (107-S12) Cheng, M.-Y., and Parra-Montesinos, G. J., Jan.-Feb. 2010 110

Steel jacket Behavior of Reinforced Concrete Columns Confined by New Steel-Jacketing Method (107-S64) Choi, E.; Chung, Y.-S.; Park, J.; and Cho, B.-S., Nov.-Dec. 2010 654

Steel plates Modeling of Reinforced Concrete Slabs Strengthened with Fiber-Reinforced Polymer or Steel Plates (107-S22) Ebead, U., and Saeed, H., Mar.-Apr. 2010 218

Stewart, M. G. Reliability Safety Assessment of Corroding Reinforced Concrete Structures Based on Visual Inspection Information (107-S66) Nov.-Dec. 2010 671

Stiffness Punching Shear Behavior of Two-Way Slabs Reinforced with High-Strength Steel (107-S47) Yang, J.-M.; Yoon, Y.-S.; Cook, W. D.; and Mitchell, D., July-Aug. 2010 468

Stiffness of Reinforced Concrete Frame Members for Seismic Analysis (107-S60) Kumar, R., and Singh, Y., Sept.-Oct. 2010 607

Stirrups

—Behavior of Large Deep Beams Subjected to Monotonic and Reversed Cyclic Shear (107-S72) Mihaylov, B. I.; Bentz, E. C.; and Collins, M. P., Nov.-Dec. 2010 726

—Performance Evaluation of Glass Fiber-Reinforced Polymer Shear Reinforcement for Concrete Beams (107-S06) Ahmed, E. A.; El-Salakawy, E. F.; and Benmokrane, B., Jan.-Feb. 2010 53

—Shear Behavior of Steel Fiber-Reinforced Concrete Beams without Stirrup Reinforcement (107-S59) Dinh, H. H.; Parra-Montesinos, G. J.; and Wight, J. K., Sept.-Oct. 2010 597

Strahota, M. T. Performance of Retrofit Highway Barriers with Mechanical Anchors (107-S37) July-Aug. 2010 381

Strain(s)

—Analytical Model for Fiber-Reinforced Polymer-Jacketed Square Concrete Columns in Axial Compression (107-S21) Lee, C.-S.; Hegemier, G. A.; and Phillippi, D. J., Mar.-Apr. 2010 208

—Measured Strains in Post-Tensioned Concrete Parking Deck Made with Shrinkage-Compensating Concrete (107-S71) Richardson, J.; Eskildsen, S.; Schiller, B.; and Jones, M., Nov.-Dec. 2010 718

Strain effect Shear Behavior of Concrete Slabs Longitudinally Reinforced with High-Performance Steel (107-S23) Desalegne, A. S., and Lubell, A. S., Mar.-Apr. 2010 228

Strength

—Seismic Design of Reinforced Concrete Bridge Columns at Subfreezing Temperatures (107-S42) Montejo, L. A.; Marx, E.; and Kowalsky, M. J., July-Aug. 2010 427

—Shear-Transfer Strength of Reinforced Concrete (107-S41) Rahal, K. N., July-Aug. 2010 419

Strengthening

—Modeling of Reinforced Concrete Slabs Strengthened with Fiber-Reinforced Polymer or Steel Plates (107-S22) Ebead, U., and Saeed, H., Mar.-Apr. 2010 218

—Strengthening of Flat Slabs Against Punching Shear Using Post-Installed Shear Reinforcement (107-S43) Fernández Ruiz, M.; Muttoni, A.; and Kunz, J., July-Aug. 2010 434

Strengthening of Flat Slabs Against Punching Shear Using Post-Installed Shear Reinforcement (107-S43) Fernández Ruiz, M.; Muttoni, A.; and Kunz, J., July-Aug. 2010 434

Stress Analytical Model for Fiber-Reinforced Polymer-Jacketed Square Concrete Columns in Axial Compression (107-S21) Lee, C.-S.; Hegemier, G. A.; and Phillippi, D. J., Mar.-Apr. 2010 208

Stress-Averaged Strain Model for Confined High-Strength Concrete (107-S18) Akiyama, M.; Suzuki, M.; and Frangopol, D. M., Mar.-Apr. 2010 179

Stress-strain relations Stress-Averaged Strain Model for Confined High-Strength Concrete (107-S18) Akiyama, M.; Suzuki, M.; and Frangopol, D. M., Mar.-Apr. 2010 179

Strut action Behavior of Large Deep Beams Subjected to Monotonic and Reversed Cyclic Shear (107-S72) Mihaylov, B. I.; Bentz, E. C.; and Collins, M. P., Nov.-Dec. 2010 726

Strut-and-tie model

—Confinement of Deep Beam Nodal Regions (107-S70) Tuchscherer, R.; Birrcher, D.; Huizinga, M.; and Bayrak, O., Nov.-Dec. 2010 709

—Secant Stiffness Method for Inelastic Design of Strut-and-Tie Model (107-S68) Eom, T.-S., and Park, H.-G., Nov.-Dec. 2010 689

—Tests on Lightweight Concrete Deep Beams (107-S65) Yang, K.-H., Nov.-Dec. 2010 663

Sucuoglu, H. Performance of Reinforced Concrete Columns Designed for Flexure under Severe Displacement Cycles (107-S36) May-June 2010 364

Suh, Y. P. Shear Behavior of Headed Anchors with Large Diameters and Deep Embedments (107-S14) Mar.-Apr. 2010 146

Sun, X.-D. Fatigue Behavior of Reinforced Concrete Beams with Corroded Steel Reinforcement (107-S51) Sept.-Oct. 2010 526

Suzuki, M. Stress-Averaged Strain Model for Confined High-Strength Concrete (107-S18) Mar.-Apr. 2010 179

T

Tadros, M. K. Fatigue Evaluation for Reinforced Concrete Box Culverts (107-S02) Jan.-Feb. 2010 13

Tang, F.-J. Fatigue Behavior of Reinforced Concrete Beams with Corroded Steel Reinforcement (107-S51) Sept.-Oct. 2010 526

Taylor, S. Investigation of Ultimate Strength of Deck Slabs in Steel-Concrete Bridges (107-S09) Jan.-Feb. 2010 82

Temperature Seismic Design of Reinforced Concrete Bridge Columns at Subfreezing Temperatures (107-S42) Montejo, L. A.; Marx, E.; and Kowalsky, M. J., July-Aug. 2010 427

Tension stiffening Smeared Rotating Crack Model for Reinforced Concrete Membrane Elements (107-S40) Broujerdian, V., and Kazemi, M. T., July-Aug. 2010 411

Tests Influence of Shear on Rotation Capacity of Reinforced Concrete Members Without Shear Reinforcement (107-S50) Rodrigues, R. V.; Muttoni, A.; and Fernández Ruiz, M., Sept.-Oct. 2010 516

Tests on Lightweight Concrete Deep Beams (107-S65) Yang, K.-H., Nov.-Dec. 2010 663

Thick-walled Spiral Post-Tensioning System for Concrete Members (107-S55) Krishnamra, N.; Limsuwan, E.; and Dawe, J., Sept.-Oct. 2010 563

Three-dimensional interaction domain Nonlinear Analysis of Cross Sections under Axial Load and Biaxial Bending (107-S38) Di Ludovico, M.; Lignola, G. P.; Prota, A.; and Cosenza, E., July-Aug. 2010 390

Tian, Y. Seismic Rehabilitation of Slab-Column Connections (107-S24) Mar.-Apr. 2010 237

Torsion Simple Rational Formulas for Cracking Torque and Twist of Reinforced Concrete Members (107-S19) Jeng, C.-H., Mar.-Apr. 2010 189

Transverse reinforcement New Formula to Calculate Crack Spacing for Concrete Plates, A (107-S05) Rizk, E., and Marzouk, H., ... Jan.-Feb. 2010 43

Transverse resistance Transverse Resistance of Masonry Infills (107-S46) Moghaddam, H., and Goudarzi, N., July-Aug. 2010 461

Transverse Resistance of Masonry Infills (107-S46) Moghaddam, H., and Goudarzi, N., July-Aug. 2010 461

Transverse strain Analytical Model for Fiber-Reinforced Polymer-Jacketed Square Concrete Columns in Axial Compression (107-S21) Lee, C.-S.; Hegemier, G. A.; and Phillippi, D. J., Mar.-Apr. 2010 208

Triaxial confinement Confinement of Deep Beam Nodal Regions (107-S70) Tuchscherer, R.; Birrcher, D.; Huizinga, M.; and Bayrak, O., Nov.-Dec. 2010 709

Tube Nonlinear Stability Analysis of Concrete-Filled Fiber-Reinforced Polymer-Tube Columns: Experimental and Theoretical Investigation (107-69) Mohamed, H. M.; Abdel-Baky, H. M.; and Masmoudi, R., Nov.-Dec. 2010 699

Tuchscherer, R. Confinement of Deep Beam Nodal Regions (107-S70) Nov.-Dec. 2010 709

Two-dimensional membrane FEA Implementation of Smeared Cyclic Bond Slip-Based Two-Dimensional Membrane Model (107-S10) So, M.; Harmon, T. G.; and Dyke, S., Jan.-Feb. 2010 92

Two-way hinges Seismic Design Method for Reinforced Concrete Two-Way Column Hinges (107-S56) Cheng, Z.-Y.; Saiid Saiidi, M.; and Sanders, D., Sept.-Oct. 2010 572

Two-Way Shear Strength of Slab-Column Connections: Reexamination of ACI 318 Provisions (106-S17)

—Widianto; Bayrak, O.; and Jirsa, J. O., Mar.-Apr. 2009 160

—Disc. by Gardner, J., Jan.-Feb. 2010 120

Two-way slabs

—Crack Width Estimation for Concrete Plates (107-S27) Marzouk, H.; Hossin, M.; and Hussein, A., May-June 2010 282

—Modeling of Reinforced Concrete Slabs Strengthened with Fiber-Reinforced Polymer or Steel Plates (107-S22) Ebead, U., and Saeed, H., Mar.-Apr. 2010 218

U

Ultimate strength
—Evaluation of Reinforced Concrete Deck Girder Bridge Bent Caps with 1950s Vintage Details: Analytical Methods (107-S53) Senturk, A. E., and Higgins, C., Sept.-Oct. 2010 544
—Evaluation of Reinforced Concrete Deck Girder Bridge Bent Caps with 1950s Vintage Details: Laboratory Tests (107-S52) Senturk, A. E., and Higgins, C., Sept.-Oct. 2010 534
Ultimate Strength of Reinforced Concrete Beams Retrofitted with Hybrid Bonded Fiber-Reinforced Polymer (107-S45) Wu, Y.-F.; Yan, J.-H.; Zhou, Y.-W.; and Xiao, Y., July-Aug. 2010. 451
Unconfined concrete Compression Lap Splice in Unconfined Concrete of 40 and 60 MPa (5800 and 8700 psi) Compressive Strengths (107-S17) Chun, S.-C.; Lee, S.-H.; and Oh, B., Mar.-Apr. 2010 170

V

Vaulted roofs Experiments on Reinforced Brick Masonry Vaulted Light Roofs (107-S35) López-Almansa, F.; Roca, P.; Sarrablo, V.; Cahís, X.; and Canet, J. M., May-June 2010 355
Vecchio, F. J.
—Pushover Analysis of Shear-Critical Frames: Verification and Application (107-S08) Jan.-Feb. 2010 72
—Pushover Analysis of Shear-Critical Frames: Formulation (107-S07) Jan.-Feb. 2010 63
Vidot-Vega, A. L. Relationship between Strain, Curvature, and Drift in Reinforced Concrete Moment Frames in Support of Performance-Based Seismic Design (107-S28) May-June 2010. 291

W

Widianto Seismic Rehabilitation of Slab-Column Connections (107-S24) Mar.-Apr. 2010 237
Wight, J. K. Shear Behavior of Steel Fiber-Reinforced Concrete Beams without Stirrup Reinforcement (107-S59) Sept.-Oct. 2010 597
Williamson, E. B. Performance of Retrofit Highway Barriers with Mechanical Anchors (107-S37) July-Aug. 2010 381
Windisch, A.
—Adaptable Strut-and-Tie Model for Design and Verification of Four-Pile Caps (Disc. 106-S15) Jan.-Feb. 2010 119
—Behavior of High-Performance Steel as Shear Reinforcement for Concrete Beams (Disc. 106-S18) Jan.-Feb. 2010 122
—Deformation Capacity of Reinforced Concrete Columns (Disc. 106-S20) Jan.-Feb. 2010 126
—Evaluation of Bundled Bar Lap Splices (Disc. 106-S23) Jan.-Feb. 2010 128
—Headed Shear Reinforcement Assemblies for One-Way Shear (Disc. 106-S82) Sept.-Oct. 2010 617
—Investigation of Dispersion of Compression in Bottle-Shaped Struts (Disc. 106-S19) Jan.-Feb. 2010 124
—New Formula to Calculate Crack Spacing for Concrete Plates, A (Disc. 107-S05) Nov.-Dec. 2010 735
—Performance Evaluation of Glass Fiber-Reinforced Polymer Shear Reinforcement for Concrete Beams (Disc. 107-S06) Nov.-Dec. 2010 738
—Punching Strength of Reinforced Concrete Footings (Disc. 106-S66) July-Aug. 2010 494
—Pushover Analysis of Shear-Critical Frames: Formulation (Disc. 107-S07) Nov.-Dec. 2010 740
—Pushover Analysis of Shear-Critical Frames: Verification and Application (Disc. 107-S08) Nov.-Dec. 2010 743
—Shear Strength of Reinforced Concrete Slender Beams with or without Axial Forces—A Generalized Theory (Disc. 106-S72) Sept.-Oct. 2010 616
Wrapping Carbon Fiber-Reinforced Polymer Confined Reactive Powder Concrete Columns—Experimental Investigation (107-S25) Malik, A. R., and Foster, S. J., May-June 2010 263
Wu, Y.-F. Ultimate Strength of Reinforced Concrete Beams Retrofitted with Hybrid Bonded Fiber-Reinforced Polymer (107-S45) July-Aug. 2010 451

X

Xiao, Y. Ultimate Strength of Reinforced Concrete Beams Retrofitted with Hybrid Bonded Fiber-Reinforced Polymer (107-S45) July-Aug. 2010. 451

Y

Yan, J.-H. Ultimate Strength of Reinforced Concrete Beams Retrofitted with Hybrid Bonded Fiber-Reinforced Polymer (107-S45) July-Aug. 2010 451
Yang, J.-M. Punching Shear Behavior of Two-Way Slabs Reinforced with High-Strength Steel (107-S47) July-Aug. 2010 468
Yang, K.-H. Tests on Lightweight Concrete Deep Beams (107-S65) Yang, K.-H., Nov.-Dec. 2010 663
Yang, S. Performance of Retrofit Highway Barriers with Mechanical Anchors (107-S37) July-Aug. 2010 381
Yang, X. Progressive Collapse Resistance to Axially-Restrained Frame Beams (Disc. 106-S55) July-Aug. 2010 486
Yi, W.-J.
—Fatigue Behavior of Reinforced Concrete Beams with Corroded Steel Reinforcement (107-S51) Sept.-Oct. 2010 526
—Progressive Collapse Resistance to Axially-Restrained Frame Beams (Disc. 106-S55) July-Aug. 2010 486
Yoon, Y.-S. Punching Shear Behavior of Two-Way Slabs Reinforced with High-Strength Steel (107-S47) July-Aug. 2010 468

Z

Zheng, Y. Investigation of Ultimate Strength of Deck Slabs in Steel-Concrete Bridges (107-S09) Jan.-Feb. 2010. 82
Zhou, Y.-W. Ultimate Strength of Reinforced Concrete Beams Retrofitted with Hybrid Bonded Fiber-Reinforced Polymer (107-S45) July-Aug. 2010. 451